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ABSTRACT

The purposes of this study were to determine which dialect features associated with particular classes and ethnic groups are unacceptable by the dominant culture in an urban community (Fort Wayne, Indiana) and to suggest implications of the findings for teaching of English language arts and skills. Phonological and inflectional features in the speech of representative informants from three ethnic groups (Anglo, Black, and Latin American) and four social classes (upper middle class, lower middle class, working class, and lower class) were tape-recorded and analyzed. The second phase of the study identified the dialect features which function as social markers and which tend to limit the life possibilities of speakers who use them. The overall pattern of subjective responses indicated an awareness by all three ethnic groups of the value of standard forms. The study, it is held, basically showed that individuals who have not mastered certain standard pronunciation and grammatical conventions may remain seriously handicapped in their chances for socioeconomic and cultural advancement. Therefore, it is suggested that in the education of teachers for the disadvantaged greater emphasis should be given to nature of usage and study of social dialects, problems of motivating students to learn a second dialect, and the techniques of developing two dialectal skills. (RJ)

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IDENTIFICATION OF DIALECT FEATURES WHICH AFFECT BOTH SOCIAL AND ECONOMIC OPPORTUNITY AMONG THE URBAN DISADVANTAGED

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ABSTRACT

Billiard, Charles Edward. Ph.D., Purdue University, August, 1969. Dialect Features Affecting the Social Mobility and Economic Opportunities of the Disadvantaged in Fort Wayne, Indiana. Major Professor: Arnold Lazarus.

In the English teaching profession, there is increasing interest in social dialects as a significant dimension of language instruction and as a cause of economic and social maladjustment in American society. This growing awareness among teachers of the importance of social dialects has been stimulated primarily by the research of linguists - particularly dialectologists. Working within the broad framework of data provided by the regional dialect investigations of the Linguistic Atlas Project of the United States and Canada, dialectologists during the past decade have focused their research on dialect differences marking social division in our highly mobile, urbanized society. Studies by McDavid, Labov, and others indicate that the social mobility and economic opportunities of the disadvantaged are strongly affected by their inability to use the standard dialect of the communities in which they live. The purposes of this study, then, are to determine empirically which dialect features associated with particular classes and ethnic groups are unacceptable by the dominant culture in an urban community (Fort Wayne, Indiana) and to suggest implications of the findings for the teaching of the English language arts and skills.

To achieve these purposes, the investigator first tape-recorded and analyzed phonological and inflectional features in the speech of

representative informants from three ethnic groups (Anglo-American, Black-American, and Latin-American) and four social classes (upper middle class, lower middle class, working class, and lower class). So that linguistic correlates of social stratification could be determined objectively, the social classification of informants was made without reference to their linguistic performance. Weighted factors of education, occupation, and residence were used to arrive at a social index for each informant. Features of speech observed to occur regularly in the language of the upper middle class were considered standard English; dialect features which deviated from those used by the upper middle class were identified as nonstandard forms.

The second phase of this study identified the dialect features which function as social markers and tend to limit the life possibilities of speakers who use them. A tape recording of variant phonological and inflectional features was presented to respondents representing disadvantaged groups as well as power-structure groups who determine many of the opportunities for the disadvantaged. These respondents reacted to the pronunciations and grammatical forms by marking attitude scales measuring their impressions of social acceptability, job potentiality, educational level, and ethnic identity associated with the dialect features.

The over-all pattern of subjective responses indicated an awareness by all socio-economic-cultural groups of the value of standard forms. However, Latin respondents, just out of the migrant stream, were least sensitive to standard forms while school teachers and upper middle-class Anglo-Americans were least tolerant of variant forms. On the other hand, upper middle-class Black-Americans, though fluent in the use of the standard dialect, were more tolerant toward nonstandard usage. Bascially, this study shows that individuals who have not mastered certain standard pronunciations and grammatical conventions may remain seriously handicapped in their chances for socio-economic and cultural advancement.

Education is one of the most promising means of helping disadvantaged persons overcome their language handicaps. Therefore, the education of prospective teachers and the further education of experienced teachers should give greater emphasis to the nature of usage, the study of social dialects, the problems of motivating students to learn a second dialect, and the techniques of developing bidialectal skills.

INTRODUCTION

In Charolotte Mayerson's biography Two Blocks Apart, Juan Gonzales, a seventeen-year-old high school senior, says, "I'm not going out into the street and talk like that. They won't believe me." Juan, keenly sensitive to differences between the language of the classroom and his "real world," has learned to shift from one dialect to another as the occasion requires. For use in his world of reality, he rejects classroom language because he knows its use there would make him socially unacceptable. In speaking to his friends in the street, he feels comfortable in saying "I ain't gonna do that."[1] Juan's use of nonstandard language is appropriate and necessary, necessary possibly even for survival in his relations with his peers.

Indeed, militant minority groups are demanding the right to use their dialects and to have them respected in the classroom. Labov observes in fact that in New York City an increasing number of Negroes, Puerto Ricans, and lower class whites are rejecting previously dominant speech patterns and are adopting Southern Negro speech as their norm.[2]

To predict the impact on American English of this rejection of middle class language usage is beyond the scope of this study. I believe that Juan and his Puerto Rican friends and many other minority ethnic groups and lower class social groups are at a disadvantage in the social relations and economic and cultural opportunities available to them unless they master the standard dialect of their communities. To encourage adolescents speaking a nonstandard dialect to learn the standard dialect, linguists suggest that teachers must first show genuine respect for the language of their students. Given full acceptance of the appropriateness of their dialects for use with their families and friends, adolescents are more willing to learn variations in language for social situations beyond their immediate environment.[3]

Unfortunately, in many secondary English classrooms in America, a monolithic concept of English usage persists, admitting no reality to the lively presence of regional and social dialects (varieties of language distinguished by unique combinations of vocabulary, grammatical forms, pronunciations, and patterns of pitch and intonation). Consequently, the cultivation of delight in cultural differences reflected in dialect variations and an awareness of the implications of dialect differences for the teaching of language arts and skills are largely unrealized.

In recent studies, Thurston Womack and Paul Stoakes have found wide discrepancies between the facts of language usage and the opinions held by teachers concerning what appropriate usage is or should be. Womack's study "Teachers' Attitudes Toward Current Usage" demonstrates that the majority of teachers participating in his study still reject most usages that scholarly information shows to be acceptable.[4] On the basis of a survey of usage attitudes among teachers of Florida, Paul Stoakes concludes that secondary teachers differ so much among themselves on specific points of usage that their counsel becomes meaningless.[5] Compounding the problem, many elementary and secondary English textbooks fail to take into account variations in regional and social dialects. Jean Malmstrom's study of 205 textbooks reveals a discouraging lack of application of recent scholarship in dialectology as reflected in an uncompromising right-wrong dichotomy on usage matters.

Intensifying the need for teachers to be knowledgeable about variations in American English is the confrontation of regional and social dialects in both inner-city and suburban classrooms resulting from a highly mobile population seeking social and economic advancement in America's urban centers.[6] Negroes of a rural Southern background, migrating to Northern cities, transplant a regional dialect into a different speech environment. In the new environment, a regional dialect becomes a social dialect labelling the cultural level and limiting the economic opportunities of its users. Mexican-Americans, trying to escape the migrant stream, remain in the North after the harvest season, seeking employment in urban centers; the cultural and language conflicts experienced by these workers and their children are often traumatic.[7] Likewise, rural Southern and Appalachian whites, American Indians, Puerto Ricans, and even corporation executives and their families find their dialects a handicap in new speech environments.

Children speaking the non-prestigious dialect of a minority group are at a distinct disadvantage in the classroom. Teachers of such classes face a supreme challenge in selecting methods and materials and establishing meaningful language priorities.[8] For pupils whose standard language is not native, special materials are needed for dealing with their systems of pronunciation, inflectional suffixes, and sentence patterns. On the other hand, for children whose language is a subcultural variety of English, materials and methods should take into account the significance of differences in usage, with emphasis on socially critical systematic features. For both groups of students, striving to become bilingual or bidialectal in their speaking, teachers need to recognize the reading and writing problems associated with usage deviations from standard dialects. For example, children speaking dialects at sharp variance with that represented in basal-reading textbooks must often deal with a greater range of phonemic-graphemic associations than must students who speak a dialect more closely approaching the one used in basal-reading texts.[9] Furthermore, students who do not discriminate between phonemic contrasts in such pairs as hoarse and horse, mourning and morning, cot and caught will probably have greater difficulty learning to spell such words than will students who have phonemic contrasts in the pronunciation of these words.[10]

To work effectively with the communication problems of various social and ethnic groups, teachers and school administrators need detailed knowledge of the social dialects of their community. So varied and complex is the settlement history of major American cities and the recent immigration of minority groups into urban centers that detailed studies of competing dialects need to be made for these communities.[11] Fort Wayne (Allen County, Indiana) is one such community. Its unique settlement history and heavy immigration of Southern Negroes since World War II, as well as a recent increase in the Mexican-American population, make a study of Fort Wayne's social dialects a seminal investigation. The findings of this study will be directed toward two humanistic purposes: (1) to a fuller appreciation and use, I hope, of the delightful varieties of usage available within the system of American English and (2) to more effective learning approaches to linguistic behavior that critically affects the life possibilities of youth and adults alike in many communities of our country.

End Notes

1. Charlotte Leon Mayerson, Two Blocks Apart (New York, 1965), p. 57.
2. William Labov, "Stages in the Acquisition of Standard English," Social Dialects and Language Learning (Champaign, 1965), pp. 96-97.
3. Thomas J. Creswell, "The Twenty Billion Dollar Misunderstanding," Social Dialects and Language Learning (Champaign, 1965), pp. 71-72.
4. Thurston Womack, "Teachers' Attitudes Toward Current Usage," The English Journal, XLVIII (April, 1959), pp. 189-190.
5. Paul Stoakes, "The Vexed Problem of English Usage," Word Study, XLII (March, 1967), pp. 1-5.
6. Raven I. McDavid, Jr., "American Social Dialects," College English, XXVI (January, 1965), pp. 254-260.
7. Albert Coleman, Director of American Migrant Opportunities Services, Fort Wayne, Indiana, related to this writer numerous instances in which Latin American children were ridiculed by other ethnic groups because of their language usage.
8. Raven I. McDavid, Jr., System and Variety in American English (Champaign, 1967), pp. 4-5.
9. K. S. Goodman, "The Linguistics of Reading," Elementary School Journal (April, 1964), pp. 6-7.
10. Raven I. McDavid, Jr., "Dialectology and the Classroom Teacher," College English, XXIV (November, 1962), p. 115.
11. McDavid, "American Social Dialects," op. cit., p. 257.

CHAPTER I

THE METHODS AND DESIGN OF THIS STUDY

Heading the list of instructions to the field workers for the Linguistic Atlas of New England is advice significant for anyone attempting scientific study:[1]

> Beware of preconceived notions. Do not be misled by what you know, but trust your ear and eye.

Good advice indeed! But having lived many years in the Fort Wayne area, I questioned from the very beginning of the study whether my ear, long accustomed to the speech tones and patterns of my community, would be adequately sensitive to the many language variations that must be present.

This chapter describes the safeguards I took against preconceived language notions--of which I had my fair share--and the attempts I made to sensitize my ear to a wider range of speech sounds. Specifically, this chapter describes the methods I used in collecting, organizing, and interpreting the language data in this study.

During the last three decades in America, field methods for regional and social dialect studies have been honed to a sharp edge by scholars working in the Linguistic Atlas project. Launched in 1931 by the Modern Language Association of America and the Linguistic Society of America,[2] the Atlas project provides a framework of data for intensive urban dialect studies. Furthermore, its scholars continue to give inspiration and leadership to researchers conducting investigations of competing dialects in our increasingly urbanized society.

Behind the Atlas project lies the pioneering work of European dialectologists. Linguistic geography had its beginning in Germany in 1876 with the work of Georg Wenker, who used a correspondence technique which asked village school teachers to translate forty standard German sentences into the local dialects.[3] Later in France, Jules Gilliéron developed a network of interview points and sent a single field worker to interview natives at each of the predetermined localities. His research, reported in L' Atlas Linguistique de la France,[4] served as a model for other European dialect studies and for the linguists who organized the Linguistic Atlas project in the United States.

The methods of this study, then, are the well-established techniques of the Linguistic Atlas project of the United States and Canada along with certain adaptations from recent urban dialect investigations. These methods can best be described by relating them to the four phases of this study, which were originally suggested by Dr. Raven I. McDavid's article, "American Social Dialects":[5]

1. The development of a social dialect profile for the community by sampling speech of the local area.
2. The comparisons of data to determine which features of speech appear to be associated with specific ethnic or social groups.
3. The determination of how ethnic and social occurrences of specific features of speech coincide with popular conceptions of what the correlations between actual usage and emotional evaluations are in a particular community.
4. The implications for teaching programs should follow once the correlations have been established between the actual usage of various ethnic and social groups and the subjective evaluations of the dominant culture.

Phase One: Collecting and Organizing the Data

To select informants using language representative of Fort Wayne, the community I selected, required a study of its settlement history along with that of Allen County and of recent migration into the community. Chapter II, which outlines the population history of this urban center, indicates that a reasonably representative sample of the population as far as ethnic identity and geographic **origin are concerned** would include the following kinds of informants:

1. Descendants of immigrants coming directly from Germany, France, Ireland, and England.
2. Descendants of immigrants from Inland North, North Midland, and South Midland dialect areas in the United States.
3. Black-American and Mexican-American natives of the community, as well as recent arrivals of these ethnic groups.

Other small ethnic groups representing less than five per cent of the population do live in the community and make vital contributions to its cultural and economic life. But I have excluded these groups because of the limitations of time and financial resources.

In addition to geographic origin and ethnic identity, other factors considered in the selection of informants include age, sex, and social class. To provide some insight into possible language usage change, three-age groups are identified as follows:

1. Elderly (sixty years or older). This group of natives, most of them descendants of old local families, represents the oldest living forms of speech in the community. Informants in this group who have limited social contacts and no more than an eighth-grade education would be similar to the Type IA (aged and old-fashioned) informants of the Linguistic Atlas. However, in this study informants in this age group having high school and college education are also included.

2. Middle aged (forty to fifty-nine years). Most of the informants in this age group correspond to the Linguistic Atlas Type IIB (high school education and wide social contacts) and Type IIIB (college education and wide social contacts).
3. Young (eighteen to thirty-nine years). This group includes all levels of education and a small sampling of hard-core unemployed.

Although no specific study is made here of speech differences between the sexes, the sample does contain an equal number of males and females to give equal representation to any features that might be characteristic of one or the other sex.

Another significant factor in the selection of informants was the requirement for a representative distribution of informants across the socio-economic levels of the community. Directly related to this matter is the problem of defining social classes. As Pederson points out, social classification of informants is one of the defects of social dialectology today.[6] Furthermore, if a study is to be objective in searching for the correlations between linguistic behavior and social status, each must be isolated and described as a separate entity. To define social class at the outset in terms of language performance would be circular reasoning and amount to introducing, *a priori*, correlations between language performance and social status.

After several systems of social classification were examined, a procedure adapted by Roger Shuy in the Detroit survey of speech[7] from a model provided by Hollingshead's *Social Class and Mental Illness*[8] was selected for this study. The procedure uses ranking scales for educational level, occupation, and housing of informants.

The educational scale had a range of values from *one* for any graduate professional degree to *seven* for less than seven years of school:[9]

Scale Value	Level of Education
1	Any graduate degree (professional)
2	College graduation (four years)
3	One year or more of college
4	High school graduation
5	Some high school (tenth grade and up)
6	Junior high school (seventh through ninth grade)
7	Less than seven years of formal schooling

The occupational scale has a range of values from *one* for major professionals to *seven* for unskilled workers:[10]

Scale Value	Occupation
1	Major professionals Executives of large concerns
2	Lesser professionals Executives of medium-sized concerns
3	Semi-professionals Administrators of small businesses
4	Technicians Owners of small businesses
5	Skilled workmen
6	Semi-skilled workmen
7	Unskilled workers

The Detroit Dialect Study uses the number of rooms per occupied unit and the quality of plumbing to rank housing.[11] For Fort Wayne and Allen County, however, the number of rooms per occupied unit is available for less than twenty per cent of the 1960 census tracts. Furthermore, these tracts are not representative samplings of the range of housing values in the community. Therefore, a different system of classifying the residences of informants had to be devised.

The median house values for the sixty-one 1960 Census tracts for Fort Wayne and Allen County[12] were ranked from high to low and then broken into six discrete groups at points where "natural" breaks occurred to form clusters of median values. These six groups were then assigned scale values of *one* through *six*, *one* for the cluster of highest median values through *six* for the group of lowest median values, to correspond to Hollingshead's breakdown of housing into six types.

The resulting housing scale follows:

Scale Value	Range of Median Values of Housing Units
1	$20,700 +
2	$17,100 - $18,500
3	$14,000 - $16,000
4	$11,100 - $13,800
5	$ 8,500 - $10,500
6	$ 7,300 - $ 8,100

If the house of an informant was clearly inferior or superior in quality (size, landscaping, upkeep) to houses of the neighborhood, the scale value was decreased or increased by one step as appropriate.

To determine how these three symbols of social status (education, occupation, and residence) can be combined, Hollingshead used multiple regression analysis to arrive at weights appropriate for each factor. The weights thus determined were *five*, *nine*, and *six* for education, occupation, and residence. These weights used as multipliers of respective scale values yield a distribution of social-position scores ranging from a low of 20 to a high of 134. For example, the social position or social index of an informant with a high-school education (scale value = 4), an occupational classification as skilled (scale value = 5), and residence in a Census tract having a median value of housing units of $20,700 + (scale value = 1) would be determined as follows:

Factor	Scale Value	Weight Factor	=	Partial Score
Education	4	5		20
Occupation	5	9		45
Residence	1	6		6
	Index of Social Position Score		=	71

Tables 1, 2, and 3 show how the social index was found for each of the informants interviewed in this study. The social index scores for these informants range from a low of 20 to a high of 129. Since higher educational, occupational, and residential levels are indicated by lower scale values, lower social index scores represent higher social position. On the other hand, higher social index scores indicate lower social position.

The ranking of the informants by social-position scores from low to high gives a continuum which can be broken into discrete segments to represent various social classes. Once the ranking and classification are accomplished and the linguistic performance of the informants is adequately observed and recorded, conclusions about the correlation of specific language features and social class can be made.

Breaking the continuum into discrete segments and the labelling of these segments as social classes are crucial to defining the standard

Table 1. Social Index of Anglo-American Informants

	EDUCATION			OCCUPATION			RESIDENCE			
Informant	Scale Value	Weight	Partial Score	Scale Value	Weight	Partial Score	Scale Value	Weight	Partial Score	SOCIAL INDEX
A1	1	5	5	1	9	9	1	6	6	20
A2	1	5	5	1	9	9	1	6	6	20
A3	1	5	5	1	9	9	2	6	12	26
A4	2	5	10	2	9	18	1	6	6	34
A5	2	5	10	2	9	18	2	6	12	40
A6	2	5	10	2	9	18	3	6	18	46
A7	2	5	10	2	9	18	3	6	18	46
A8	2	5	10	2	9	18	3	6	18	46
A9	6	5	30	2	9	18	2	6	12	60
A10	4	5	20	3	9	27	3	6	18	65
A11	4	5	20	3	9	27	3	6	18	65
A12	4	5	20	3	9	27	4	6	24	71
A13	4	5	20	3	9	27	4	6	24	71
A14	6	5	30	3	9	27	3	6	18	75
A15	6	5	30	3	9	27	3	6	18	75
A16	6	5	30	3	9	27	3	6	18	75
A17	6	5	30	3	9	27	4	6	24	81
A18	6	5	30	3	9	27	4	6	24	81
A19	4	5	20	6	9	54	2	6	12	86
A20	6	5	30	4	9	36	4	6	24	90

Table 2. Social Index of Black-American Informants.

	EDUCATION			OCCUPATION			RESIDENCE			
Informant	Scale Value	Weight	Partial Score	Scale Value	Weight	Partial Score	Scale Value	Weight	Partial Score	SOCIAL INDEX
B21	1	5	5	2	9	18	2	6	12	35
B22	2	5	10	2	9	18	2	6	12	40
B23	2	5	10	2	9	18	2	6	12	40
B24	2	5	10	2	9	18	2	6	12	40
B25	2	5	10	2	9	18	3	6	18	46
B26	2	5	10	2	9	18	3	6	18	46
B27	2	5	10	2	9	18	3	6	18	46
B28	4	5	20	5	9	45	3	6	18	83
B29	4	5	20	6	9	54	3	6	18	92
B30	6	5	30	5	9	45	3	6	18	93
B31	4	5	20	6	9	54	4	6	24	98
B32	5	5	25	7	9	63	3	6	18	106
B33	5	5	25	7	9	63	4	6	24	112
B34	6	5	30	6	9	54	5	6	30	114
B35	5	5	25	6	9	54	6	6	36	115
B36	5	5	25	6	9	54	6	6	36	115
B37	6	5	30	7	9	63	4	6	24	117
B38	5	5	25	7	9	63	5	6	30	118
B39	5	5	25	7	9	63	5	6	30	118
B40	6	5	30	7	9	63	6	6	36	129

Table 3. Social Index of Latin-American Informants.

	EDUCATION			OCCUPATION			RESIDENCE			
Informant	Scale Value	Weight	Partial Score	Scale Value	Weight	Partial Score	Scale Value	Weight	Partial Score	SOCIAL INDEX
I41	3	5	15	4	9	36	3	6	18	69
I42	4	5	20	6	9	54	3	6	18	92
I43	6	5	30	5	9	45	4	6	24	99
I44	4	5	20	7	9	63	3	6	18	101
I45	4	5	20	7	9	63	3	6	18	101
I46	6	5	30	5	9	45	5	6	30	105
I47	6	5	30	6	9	54	5	6	30	114
I48	6	5	30	6	9	54	6	6	36	120
I49	7	5	35	6	9	54	6	6	36	125
I50	7	5	35	7	9	63	5	6	30	128

and nonstandard dialects of the community and in relating these definitions to those used in major studies of social dialects. Indeed, if valid comparisons of local data to regional and national patterns are to be made, the social classification system used must be related to the broader social systems of the nation.

Four of the five social class divisions used by Labov in _The Social Stratification of English in New York City_[14] seemed to cover adequately the socio-economic range of informants interviewed in this study and to describe accurately four clusters of informants into which the social index continuum tends to break. These social class divisions are (1) upper middle class (college graduates and career men in professions), (2) lower middle class (high-school graduates, often with specialized training; semi-professionals; and owners of small businesses), (3) working class (persons with some high-school education, usually blue-collar workers), and (4) lower class (persons with a grade-school education or less, usually unskilled workers).

In Table 4, the fifty informants participating in this study have been grouped into these four social classes. This table also gives the complete identification coding for each informant and the breakdown of this code. The first letter of the code gives the ethnic identity of the informant: _A_ = Anglo-American, _B_ = Black-American, and _L_ = Latin-American.[15] The number following the letter is different for each individual and is assigned according to the rank order of the individual on the social index scale within his ethnic group, e.g., Anglo-American numbers range from one to twenty, Black-American numbers from twenty-one to forty, and Latin-American numbers from forty-one to fifty. Thus, an individual informant will often be identified in the following pages by

Table 4. Social Classes and Coding of Informants

Social Class of Informants	Ethnic Group	Social Index	Age Group	Years in Community
Upper Middle Class				
A1(20)Y-N	Anglo-Am.	20	Young	Native
A2(20)O-N	Anglo-Am.	20	Old	Native
A3(26)Y-N	Anglo-Am.	26	Young	Native
A4(34)Y-N	Anglo-Am.	34	Young	Native
B21(35)Y-N*	Black-Am.	35	Young	More than 10 yrs.
B22(40)Y-N	Black-Am.	40	Young	Native
B23(40)Y-N*	Black-Am.	40	Young	More than 10 yrs.
B24(40)Y-N*	Black-Am.	40	Young	More than 10 yrs.
A5(40)M-N	Anglo-Am.	40	Middle Aged	Native
A6(46)M-N	Anglo-Am.	46	Middle Aged	Native
A7(46)O-N	Anglo-Am.	46	Old	Native
A8(46)O-N	Anglo-Am.	46	Old	Native
B25(46)M-N*	Black-Am.	46	Middle Aged	More than 10 yrs.
B26(46)Y-I	Black-Am.	46	Young	Less than 10 yrs.
B27(46)Y-I	Black-Am.	46	Young	Less than 10 yrs.
Lower Middle Class				
A9(60)M-N	Anglo-Am.	60	Middle Aged	Native
A10(65)M-N	Anglo-Am.	65	Middle Aged	Native
A11(65)O-N	Anglo-Am.	65	Old	Native
L41(69)Y-I	Latin-Am.	69	Young	Less than 10 yrs.
A12(71)O-N	Anglo-Am.	71	Old	Native
A13(71)O-N	Anglo-Am.	71	Old	Native
A14(75)M-N	Anglo-Am.	75	Middle Aged	Native
A15(75)M-N	Anglo-Am.	75	Middle Aged	Native
A16(75)M-N	Anglo-Am.	75	Middle Aged	Native
Working Class				
A17(81)O-N	Anglo-Am.	81	Old	Native
A18(81)O-N	Anglo-Am.	81	Old	Native
B28(83)O-N	Black-Am.	83	Old	Native
A19(86)Y-N	Anglo-Am.	86	Young	Native
A20(90)O-N	Anglo-Am.	90	Old	Native
L42(92)Y-N	Latin-Am.	92	Young	Native
B29(92)O-N*	Black-Am.	92	Old	More than 10 yrs.
B30(93)O-N*	Black-Am.	93	Old	More than 10 yrs.
B31(98)M-N*	Black-Am.	98	Middle Aged	More than 10 yrs.
L43(99)Y-I	Latin-Am.	99	Young	Less than 10 yrs.
L44(101)Y-I	Latin-Am.	101	Young	Less than 10 yrs.
L45(101)Y-I	Latin-Am.	101	Young	Less than 10 yrs.
L46(105)O-N*	Latin-Am.	105	Old	More than 10 yrs.
B32(106)Y-I	Black-Am.	106	Young	Less than 10 yrs.

Table 4. (cont'd.)

Social Class of Informants	Ethnic Group	Social Index	Age Group	Years in Community
Lower Class				
B33(112)Y-I	Black-Am.	112	Young	Less than 10 yrs.
B34(114)Y-I	Black-Am.	114	Young	Less than 10 yrs.
L47(114)Y-I	Latin-Am.	114	Young	Less than 10 yrs.
B35(115)Y-I	Black-Am.	115	Young	Less than 10 yrs.
B36(115)Y-I	Black-Am.	115	Young	Less than 10 yrs.
B37(117)Y-N	Black-Am.	117	Young	Native
B38(118)Y-I	Black-Am.	118	Young	Less than 10 yrs.
B39(118)Y-I	Black-Am.	118	Young	Less than 10 yrs.
L48(120)Y-I	Latin-Am.	120	Young	Less than 10 yrs.
L49(126)Y-I	Latin-Am.	126	Young	Less than 10 yrs.
L50(128)O-N*	Latin-Am.	128	Old	Native
B40(129)M-I	Black-Am.	129	Middle Aged	Less than 10 yrs.

the first letter and number: A1, B22, L50. In parentheses is the social index number. The age group of the informant comes next: Y = young (eighteen to thirty-nine), M = middle aged (forty to fifty-nine), and O = elderly (sixty or older). The last letter of the code is a clue to the geographic origin of the informant and the length of time he has spent in the community: N = native (born in the Fort Wayne community and spent most of life there), N* = long-time resident of the community (born in another community but spent more than the last ten years in the Fort Wayne community), I = recent arrival (born in another community and spent less than ten years in Fort Wayne).

How can the social classes thus identified and standards of language usage be objectively related to each other? Fries in American English Grammar defines standard English as that variety of language used by those who hold positions of considerable responsibility and respect and who perform the important affairs of the community. He identifies these persons as college graduates and describes their positions as usually in the category of the professions, e.g., law and medicine.[16] The social class thus described by Fries fits rather well that of the upper middle class in this study, especially if one allows for the expansion of professional fields in the last twenty years and includes managers and proprietors of large businesses. Fries' operational definition of standard English is applied in this study; consequently, those features of language observed to occur regularly in the speech of the upper middle class are described as standard English usage in the Fort Wayne community. Further, since Linguistic Atlas research records regional varieties of cultivated usage, comparisons of local standard usage with regional and national varieties are made. Nonstandard usage, on the other hand, is that variety of language usage which deviates from that used by the upper middle class as identified in this study.

Essentially two styles (functional varieties), a formal interview style and an informal conversational style,were elicited from informants by use of (1) the short worksheets of the Linguistic Atlas of the United States and Canada (compiled by Kurath and adapted by Davis and McDavid for the North Central states) and (2) conversational digressions during the interviews on topics of interest to the informant, e.g., family history, narrow brushes with death, political and social issues. When significant stylistic changes occur in the speech of an informant, these functional varieties are reported.

To make a distinction between cultural levels and functional varieties of usage is important in this study as well as in the English classroom. As Kenyon has shown, speakers functioning on either the standard or nonstandard level will usually command a variety of styles within their cultural level. In "Cultural Levels and Functional Varieties," Kenyon observes that the "application of the term level to those different styles of language that are not properly designated as better or worse, desirable or undesirable creates a false impression."[17] For instance, the expression "colloquial level" unfortunately still in use suggests to some a usage of inferior quality to that of formal English, even though colloquialisms are proper and natural in informal situations. Kenyon's usage classification system is based on two separate principles: culture and function. Under the heading of culture, he evaluates usage as standard (educated) or nonstandard (half-educated or illiterate); under the heading of function, he classifies usage as formal or informal. Formal utterances are those appropriate for ceremonial and serious occasions; informal expressions are those suitable for familiar or intimate occasions.

Each of the following expressions in terms of cultural level is standard English: "Let us dine at Andre's tonight."; "Let's eat at Hall's tonight."; "Let's go to chow." However, the first utterance is a functional variety appropriate for formal occasions; the second and third, for informal occasions. On the other hand, "Let's put on the feed bag" is not only informal functionally but is also nonstandard culturally.

The short worksheets for the North Central states were used with twenty-two native informants in order to identify basic dialect features of the community. The approximately 600 items on the worksheet cover regionally and socially significant lexical, grammatical, and phonological variants. A shortened version of the worksheets, adapted for the Chicago dialect study, Communication Barriers to the Culturally Deprived,[18] was used with twenty-eight middle-aged and young informants, several of them recent arrivals in the community.

Whenever possible, the interviews were conducted in the home of the informant in order to put him at ease. I tape-recorded all interviews and made detailed phonetic analyses later. This procedure provided a permanent record of the interview, enabled the interviewer to concentrate on framing questions, especially to elicit informal responses, and reduced the total interviewing time. However, when the interviewer is a highly skilled phonetician, direct transcription of the interview undoubtedly has advantages over the use of the tape recorder.

To facilitate relating the data gathered in this Northeastern Indiana community to Linguistic Atlas data, I selected symbols from the modified International Phonetic Association system of phonetic notation described in the Handbook of Linguistic Geography of New England.[19] The selection of symbols was determined by the number of significant phonetic variations I was able to hear in the speech of the fifty informants. Chapter II gives a complete listing of the phonetic symbols used in transcribing responses.

Phase Two: Comparing Dialect Features of Various Ethnic and Social Groups

Since the population history of Fort Wayne predicts strong North Midland and Inland North dialect influences in the community, it appeared that much of the phonological data amassed in this investigation could be meaningfully classified and analyzed in relation to findings in the Linguistic Atlas derivative study, The Pronunciation of English in the Atlantic States.[20] Thus, at the outset, the phonological data was organized into a pattern similar to that used in the Kurath and McDavid study.

In the context of two or more words, I examined the allophonic variations of vowel phonemes in the following environments: (1) stressed vowels occurring only before consonants (checked vowels), (2) stressed vowels occurring both before consonants and at the end of words (free vowels), and (3) unstressed and weakly stressed vowels. Likewise, I made a search through key words for significant variations in consonants, such as (1) tendency to voice / t /, (2) the weakening or dropping of an element or elements of consonant clusters, (3) the weakening of constriction of postvocalic / r /, and (4) the occurrence of the voiced bilabial fricative in the speech of Latin informants [β].

I then developed a tabular presentation of the phonetic data for key utterances for the purpose of showing the distribution of linguistic variables across social and ethnic groups. Table 5 illustrates the method. The phonetic transcription for the word *greasy*, as pronounced by each informant, is entered on the chart. Informants are grouped according to their ethnic identity and ranked within their ethnic group by social index number, from highest to lowest social class. Columns are then defined in terms of significant phonetic and phonemic variations observed in the fifty pronunciations of the key word. For example, the word *greasy* exhibits allophonic variations in the phoneme / i / ranging from monophthongal varieties [i ∿ i ·] to diphthongal forms [Ii ∿ i]. An interesting phonemic variation is also exhibited in this word. The phoneme / s / in *greasy* is distributed across all ethnic and social groups of the sample. Although the phoneme / z / shows a lower incidence in the Anglo-American group than in the Black-American group, its use is distributed across all Anglo-American social classes sampled. Such a mixed distribution of the / z / and / s / phonemes

Table 5. Allophones of / i / and Incidence of / s / and / z / in Greasy.

LEGEND

A = [ɨi~ɪj] in stressed syllables

B = [i~i·] in stressed syllables

C = [s] in greasy

D = [z] in greasy

Informants	Phonetic Transcription	A	B		C	D				
Anglo-American										
A1 (20) Y-N	gri˅isɨ	X			X					
A2 (20) O-N	gri˅isi	X			X					
A3 (26) Y-N	grijzɨ	X				X				
A4 (34) Y-N	gri˅izɪ˄	X				X				
A5 (40) M-N	gri˅isɨ	X			X					
A6 (46) M-N	gri˅izɪ˄i	X				X				
A7 (46) O-N	gri˅i·sɨ	X			X					
A8 (46) O-N	gri˅isi˅	X			X					
A9 (60) M-N	grɪ˄isi	X			X					
A10 (65) M-N	gri·sɨ		X		X					
A11 (65) O-N	grɪ˄isɪ˄	X			X					
A12 (71) O-N	grɪizɨ	X				X				
A13 (71) O-N	grɪ˄izɨ	X				X				
A14 (75) M-N	gri·si˅		X		X					
A15 (75) M-N	grɪ˄isɪ˄i	X			X					
A16 (75) M-N	grɪ˄isɨ	X			X					
A17 (81) O-N	grɪ˄izɨ	X				X				
A18 (81) O-N	gri·si˅		X		X					
A19 (86) Y-N	grɪ˄isɨ	X			X					
A20 (90) O-N	grɪ˄isɨ	X			X					
	Anglo-American Totals:	17	3		14	6				
Black-American										
B21 (35) Y-N*	gri·sɨ		X		X					
B22 (40) Y-N	grɪ˄izɪ˄	X				X				
B23 (40) Y-N*	gri˅isɨ	X			X					
B24 (40) Y-N*	grɪ˄isɨ	X			X					
B25 (46) M-N*	gri˅isɪi	X			X					
B26 (46) Y-I	gri˅izɨ	X				X				
B27 (46) Y-I	gri˅i·zɨ	X				X				

Table 5. (cont'd.)

LEGEND

A = [ɪi~ij] in stressed syllables   C = [s] in greasy

B = [i~i·] in stressed syllables   D = [z] in greasy

Informants	Phonetic Transcription	A	B		C	D
Black-American						
B28 (83) O-N	griˇizᵻ	X				X
B29 (92) O-N*	griˇi·zᵻ	X				X
B30 (93) O-N*	griˇi·sᵻ	X			X	
B31 (98) M-N*	griˇi·siˇ	X			X	
B32 (106) Y-I	griˇi·ziˇ	X				X
B33 (112) Y-I	gri^isiˇ	X			X	
B34 (114) Y-I	griˇi·zᵻ	X				X
B35 (115) Y-I	griˇi·zᵻ	X				X
B36 (115) Y-I	grɪˇi·zᵻ	X				X
B37 (117) Y-N	griˇi·si	X			X	
B38 (118) Y-I	grɪ^i·sɪ^	X			X	
B39 (118) Y-I	grɪ^i·zᵻ	X				X
B40 (129) M-I	griˇi·zᵻ	X				X
	Black-American Totals:	19	1		9	11
Latin-American						
L41 (69) Y-I	gri·sᵻ		X		X	
L42 (92) Y-N	grɪ^isᵻ	X			X	
L43 (99) Y-I	gri·si		X		X	
L44 (101) Y-I	griˇ·siˇ		X		X	
L45 (101 Y-I	griˇ·siˇ		X		X	
L46 (105) O-N*	gri·siˇ		X		X	
L47 (114) Y-I	griˇ·siˇ		X		X	
L48 (120) Y-I	gri·si		X		X	
L49 (126) Y-I	gri·si		X		X	
L50 (128) O-N*	griˇ·siˇ		X		X	
	Latin-American Totals:	1	9		10	
	Base Sample Totals:	36	14		33	17

in the word _greasy_ indicates that both pronunciations qualify as standard forms in the community. Usages distributed across lower social classes but not found in the upper-middle class spectrum would qualify as nonstandard forms. However, some nonstandard speech features may have little effect upon a listener's judgment of the social status of the speaker. These features are designated as social _indicators_ by Labov[21] and others to distinguish them from those speech features known as social _markers_, which do have consistent effects upon the listener's conscious or subconscious judgment of the speaker's status. Whether subjective responses of various socio-economic groups to these pronunciations of _greasy_ and other pronunciation variants would correlate highly with the observed usage practice is a question Phase Three of this study attempts to answer. The foregoing tabular method of organizing the data also makes possible the identification of dialect differences between the three ethnic groups.

In effect, the use of these charts brings together two processes performed independently of each other: the social classification of the informants and the observation of their linguistic behavior. Thus, reasonably objective conclusions about the correlation of specific language features and social stratification seem possible. Chapter III deals with phonological variants and Chapter IV primarily with inflectional variants in verbs and pronouns.

Phase Three: Determining Correlations Between Actual Usage and Popular Conceptions of Usage

Phase Two is designed to identify dialect cleavages along social and ethnic lines. As previously mentioned, some of these deviations

from the prestigious dialect may have little impact upon the life possibilities of individuals. These dialect features need to be sorted out empirically from ones which do handicap speakers, and the critical features for such persons need to be given priority in the English curriculum. Phase Three investigates the correlation between actual usage and popular conceptions of usage.

A study directed by McDavid and Austin in Chicago shows that pronunciation is a significant factor in eliciting negative and positive attitudes.[22] Similarly, results of Labov's subjective tests of phonological variables (e.g., / t / for / θ / in thing, omission of the final preconsonantal / r /) led him to the conclusion that "subjective reactions to phonological variables form a deeply embedded structure which is recognized by the entire speech community."[23]

Following guidelines established by the Labov and McDavid studies, this investigation uses a tape recording of dialect features and a set of attitude scales to measure the subjective responses made by selected socio-economic groups in the community to phonological and grammatical deviations from the prestigious dialect. Six residents of the community, representing the Anglo-American, Black-American, and Latin-American ethnic groups and standard and nonstandard usage, cooperated in the tape recording of contrasting forms of phonological and grammatical usage. Phonological forms which were tape recorded include samplings from the following categories: (1) incidental phonemic variations, / čImni ∿ ɔ̌Imli /; (2) slight phonetic variations, [ɔɪɫ ∿ oˇɪɫ]; (3) suprasegmental variations of stress, / 'Kɑbwɛb ∿ 'Kɑb'wɛb /; (4) combined suprasegmental and phonemic variations, / əm'brɛlə ∿ ɑmbə'ɛlə /; (5) systematic variations in (a) low vowels,

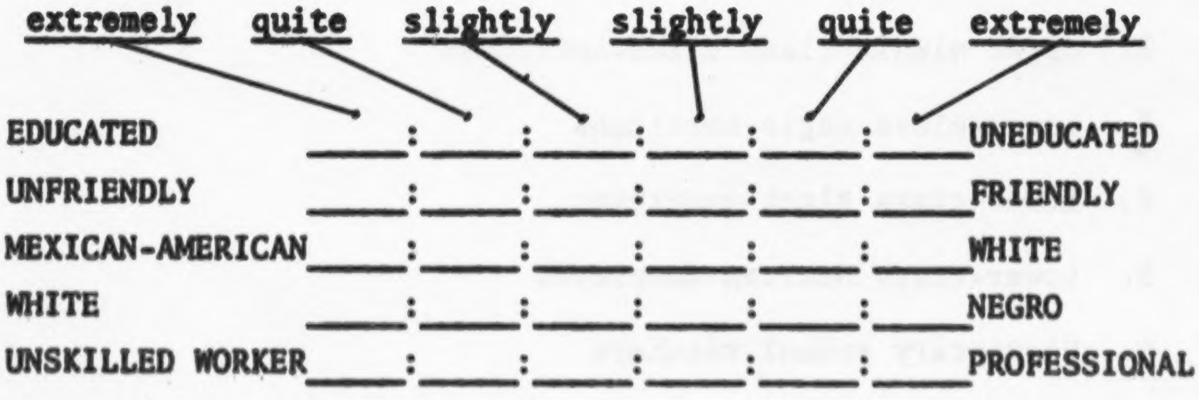
/ wɔʃ ∿ wɑʃ /, (b) diphthongs, / dɑun ∿ daun /, and (c) constriction of / r /, [foɚ ∿ foə̯ ∿ fo]. Sampling of grammatical devices include variations in the (1) noun plural: five *dollar*, *dollars*; (2) noun genitive: Mr. *Smith* car, Mr. *Smith's* car; (3) demonstrative pronoun: *them*, *those* boys; (4) reflective pronoun: *himself*, *hisself*; (5) comparisons of adjectives: *better*, *more better*; (6) verb forms (past tense: *drowned*, *drownded*; past participle: *had drunk*, *drunk*; and unorthodox uses of the verb *be*: we *be living*, we *have been living*); and (7) double negatives: He *can't* do *nothing*, He *can't* do *anything*.

The groups of respondents who were asked to listen to the tape recording of contrasting dialect features are samplings from populations which I judged to be highly important in determining the social, economic, and cultural opportunities of disadvantaged groups. The respondents selected are from the following populations:

1. Upper middle-class Anglo-Americans
2. Upper middle-class Black-Americans
3. Lower-class Anglo-Americans
4. Lower-class Black-Americans
5. Lower-class Mexican-Americans
6. Elementary school teachers
7. High school English teachers
8. Owners of businesses, business managers, and personnel directors.

The rationale for the selection of the respondents is based upon the following considerations. Militant leaders of minority groups are viewing the prestigious dialects as a part of an oppressive culture. Thus, the attitudes of lower-class ethnic groups toward a prestigious dialect are crucial in any attempt at dialect engineering. Likewise, since teachers have the prime responsibility for effecting dialect changes, their attitudes toward subcultural varieties of language are vital. Furthermore, the language prejudices of the man who does the hiring and firing are equally important since he affects the economic possibilities of minority groups.

The attitude scales on which the respondents were asked to express their reactions to the various dialect features are based on Osgood's semantic differential, a method of measuring attitudes toward particular words or concepts in determining their full meaning. The feasibility of this approach to measuring subjective responses to pronunciation was established by Vernon and Carolyn Larsen in their contribution to the Chicago dialect study.[24] The attitude scales used in this study are illustrated below:



EDUCATED _____:_____:_____:_____:_____:_____UNEDUCATED
UNFRIENDLY _____:_____:_____:_____:_____:_____FRIENDLY
MEXICAN-AMERICAN_____:_____:_____:_____:_____:_____WHITE
WHITE _____:_____:_____:_____:_____:_____NEGRO
UNSKILLED WORKER_____:_____:_____:_____:_____:_____PROFESSIONAL

The complete instructions accompanying the scale and the script for the dialect test tape are given in Appendix C.

Chapter IV organizes and interprets the data generated in this phase of the research.

Phase Four: Applying the Findings

Phase Four is concerned with interpreting and applying the findings of this study to the teaching of English usage. Chapter VI deals with these implications.

End Notes

1. Hans Kurath, et al., Handbook of the Linguistic Geography of New England (Providence, 1939), p. 48.

2. Ibid., pp. xi-xii.

3. Ferdinand Wrede, et al., Deutscher Sprachatlas (Marburg, 1926).

4. Jules Gilliéron and Edmond Edmont, Atlas Linguistic de France (Paris, 1902-1910).

5. Raven I. McDavid, Jr., "American Social Dialects," College English, XXVI (January, 1965), pp. 254-260.

6. Lee A. Pederson, "Some Structural Differences in the Speech of Chicago Negroes," Social Dialects and Language Learning (Champaign, 1964), p. 29.

7. Roger Shuy, Field Techniques in an Urban Language Study (Washington, 1968), pp. 11-16.

8. August B. Hollingshead and Fredrick C. Redlick, Social Classes and Mental Illness (New York, 1958), p. 394.

9. Shuy, op. cit., p. 12.

10. Ibid.

11. Ibid., p. 13.

12. U.S. Census of Population and Housing: 1960 Census Tracts, Fort Wayne, Indiana (Washington, 1962), pp. 39-40.

13. Hollingshead, op. cit., pp. 387-397.

14. William Labov, The Social Stratification of English in New York City (Washington, 1966), p. 217.
    Labov bases his social classification system on Kahl's The American Class Structure (New York, 1957). Kahl's social class divisions include upper class, upper middle class, lower middle class, working class, and lower class. These divisions are based on educational, occupational, and income characteristics of the national population.

15. In this study, the term *Anglo-American* is used to designate members of the Caucasian race whose native language is English, and the term *Black-American* is used to designate members of the Black race whose native language, likewise, is English. The expression *Latin-American*, although generally used to identify Spanish-speaking people of the Americas, is used in this study to designate informants whose native or second language is Mexican Spanish. Most of the informants interviewed preferred the term *Latin-American*. An exception to the use of this expression occurs in the subjective response tests where *Mexican-American* is used as a more specific term for eliciting responses of listeners in the Fort Wayne community.

16. Charles Carpenter Fries, *American English Grammar* (New York, 1940), pp. 30-32.

17. John S. Kenyon, "Cultural Levels and Functional Varieties of English," *Aspects of American English* (New York, 1963), p. 150.

18. Alva L. Davis and Raven I. McDavid, Jr., "Gathering the Data," in *Communication Barriers for the Culturally Deprived*, edited by Raven I. McDavid, Jr. and William M. Austin (Chicago, 1966), p. 2.

19. Kurath, *op. cit.*, pp. 122-146.

20. Hans Kurath and Raven I. McDavid, Jr., *The Pronunciation of English in the Atlantic States* (Ann Arbor, 1961).

21. William Labov, "Stages in the Acquisition of Standard English," *Social Dialects and Language Learning* (Champaign, 1965), p. 102.

22. Vernon S. Larsen and Carolyn H. Larsen, "Reactions to Pronunciations," in *Communication Barriers for the Culturally Deprived*, edited by Raven I. McDavid and William M. Austin (Chicago, 1966), p. 2.

23. Labov, *op. cit.*, p. 450.

24. McDavid and Austin, *op. cit.*, p. 2.

CHAPTER II

POPULATION HISTORY OF FORT WAYNE

As recently as two decades ago, phoneticians recognized no more than three dialect areas in the United States. Typical of this view is that expressed by Stuart Robertson in The Development of Modern English:[1]

> ...the concept of a threefold division among speakers of American English is as familiar to the man in the street as to the phonetician....American speakers use either Southern English, the English of New England, or finally that which for lack of a better name has been called "Western" or "General."

Such a tripartite division of the United States into dialect areas, though still found in some secondary textbooks,[2] has long been recognized by dialectologists as an oversimplification. Using Linguistic Atlas data for the Atlantic Seaboard, Hans Kurath has identified eighteen dialect areas covering the region from Maine to South Carolina and inland into the Appalachians.[3] How migrations into the interior of the country and westward to the Pacific Coast have distributed and mixed dialects and just how many major dialect areas there are in the United States are still matters of scholarly investigation and dispute.[4] Before Linguistic Atlas evidence became available, such widely separated cities as Buffalo, Cincinnati, and Fort Wayne would have been placed in the same "catch all" dialect area, General American; however, analysis of Atlas data has enabled dialectologists to divide the region encompassing these cities into three dialect areas: (1) Inland Northern, originating in western New

England and extending westward through upstate New York, the northern one-fifth of Pennsylvania, northern Ohio, northern Indiana, and the Great Lakes region; (2) North Midland, derived from Pennsylvania and spreading westward into the central portions of Ohio, Indiana, and Illinois; and (3) South Midland, the speech of the western Carolinas, Tennessee and Kentucky, southern West Virginia, and southern portions of Ohio, Indiana, and Illinois.[5]

One may indeed wonder why the native-born inhabitants of Buffalo, Cincinnati, and Fort Wayne happen to speak distinctly different dialects. As Raven McDavid points out, answers to this question range from the fanciful to the factual. Fanciful hypotheses conjecture physiological and climatological factors as accounting for dialect variation and distribution. For example, some theorize that the Negro's lips are too thick to allow him to pronounce the postvocalic / r /; others maintain that Minnesotans nazalize their speech because of the damp climate. Dialectologists, on the other hand, have identified the following underlying forces affecting dialect distribution in America: (1) the influence of a large group in the early population of an area; (2) the effect of migration on speech patterns along migration routes; (3) the influence of physical geography, such as mountains, swamps, and deserts on communication and transportation; (4) the manifestation of social pressures by cultural centers; (5) the effect of the social structure on the speech of various social groups in the community and (6) the impact of the speech and culture of a large body of immigrants on the dialect of native inhabitants. Of these various factors, McDavid considers the history of population as the most fundamental in accounting for dialect variation and distribution.[6]

On the basis of population history, the Inland Northern and South Midland dialects play a more dominant role in the development of dialect areas west of the Appalachians than do North Midland, South, and Eastern New England dialects. Eastern New Englanders turned to manufacturing and the sea; Southerners confined their population expansion largely to cotton-growing areas; and North Midlanders of Pennsylvania were restricted from early westward movement by the absence of relatively easy and economical transportation, such as was available elsewhere on lakes and rivers. On the other hand, the people of the Inland Northern dialect area of New York and western New England had easy access to the Great Lakes region by way of the Erie Canal, following its completion in 1825, and inexpensive steamboat passage on the Great Lakes. Likewise, restless frontiersmen of the South Midland dialect areas of West Virginia, the Carolina mountains, and eastern Tennessee and Kentucky made at least part of their journey into southern Ohio, Indiana, and Illinois by using flatboats on the Ohio River and its tributaries.[7]

In spite of this overall settlement pattern of the Great Lakes region and the Ohio Valley, the population history of Fort Wayne and Allen County, Indiana, predicts the dominance of North Midland dialect features, accompanied by a moderate mixture of Inland Northern and South Midland. A peculiar combination of geographic, political, and economic forces helps to account for this deviation from the population settlement norms of the Midwest and to explain a complex intermingling of competing dialects.

The confluence of the St. Mary's River and the St. Joseph River to form the Maumee, which flows northeastward into Lake Erie, and the short seven-mile portage from the St. Mary's to the Little Wabash, joining the Great Lakes and the Mississippi River, account for the early importance of Fort Wayne. Recognizing the strategic value of this site for travel and defense, the Miami Indians built a village here. The French, finding this route from the Great Lakes to the Mississippi shorter than that via the Kankakee River and enjoying a lucrative fur trade with the Indians, built Fort Miami in the late Seventeenth Century. During the first half of the Eighteenth Century, the French and English fought for control of the area, with the English finally winning the struggle at the close of the French and Indian War in 1760. Probably little evidence of the influence of the French on the language of the community will be found, other than the use of some place names.

After the Revolutionary War, President Washington, aware of the military and economic importance of Miami Town, sent General Josiah Harmar to establish a military post at the village. Harmar's army was defeated by the Indians led by Little Turtle. A second expedition headed by General St. Clair also met defeat. The third expedition, under the command of Anthony Wayne, defeated the Indians in the Battle of Fallen Timbers. Shortly thereafter, in October, 1794, Wayne's army erected a stockade across the river from Miami Town, and under American military protection the village of Fort Wayne came into existence.[8]

Though the site of Fort Wayne was strategic at the time for military control of the Maumee and Wabash Rivers and for the development of fur trade with the Indians, it was not readily accessible nor attractive to Yankee and South Midland settlers. The Treaty of Greenville, ratified by Little Turtle in 1795, opened up much of Ohio and a narrow strip of eastern Indiana to the white settlers, but the Indians granted the Americans only a small tract of land at Fort Wayne. Consequently, there was little incentive for settlers seeking farm land to make their way upstream on the Maumee or downstream through the timber-strewn St. Mary's River to Fort Wayne; therefore, during these early years the principal support of the village was the fur trade. Furthermore, innumerable lakes and swamps covered the area north of the village to the Michigan boundary, and rugged, hilly terrain sprawled across the northeastern corner of the state.[9] These barriers discouraged the Yankees migrating via the Great Lakes into northern Ohio and southern Michigan from pushing southward. Likewise, to the east, the Black Swamp, a marsh wasteland covering much of northwestern Ohio, diverted the stream of Yankee immigration into Michigan.[10] In addition, an uneasy truce between the Indians and white men prevailed in northern Indiana at the end of the Seventeenth Century. As late as 1813, soldiers were ambushed by Indians a short distance from Fort Wayne.[11]

In the meantime, far to the south, the South Midlanders were moving down the Ohio and up its tributaries to settle the bottom lands of southern Ohio and Indiana.

The resulting slow population growth of fort Wayne until the building of the Wabash and Erie Canal is recorded in early diaries and letters and by the first official census of Allen County in 1830. In 1819, Captain James Riley was sent to Fort Wayne to survey land acquired from the Miami Indians. He reported that there were fewer than thirty houses around the Fort.[12] And in 1823, Major S. H. Long, a topographical engineer working in Fort Wayne, recorded his impressions of the nature and origin of the inhabitants:[13]

> The village is small and contains a mixed and apparently worthless population. The inhabitants are chiefly of Canadian origin, all more or less imbued with Indian blood. The confusion of languages owing to the diversity of Indian tribes which generally collect near the Fort makes the traveler imagine himself in a real Babel.

But by 1829 the population had jumped to almost 400. The opening of a Land Office in 1822, the organization of a county government in 1823, and talk of building a canal began to attract more and more settlers to the community, according to Reverend Charles E. Furman, a Presbyterian minister.[14] The 1830 United States Census for Allen County records a total population of 996, nonetheless a comparatively slow population growth of this American settlement during the first thirty-five years of its existence. For in the meantime, by contrast, the population of Indiana had grown to 343,031 [15] with the heaviest concentration of inhabitants in southern Indiana as a result of the migration of South Midlanders using primarily the waterways of the Ohio River and its tributaries.[16]

But during the next thirty years, from 1830 to 1860, stimulated by the opening of transportation and communication lines to the east and the expansion of industry, the population of Fort Wayne and Allen County grew rapidly. The following table shows a nearly 3,000 per cent increase in population.

Construction of the Wabash and Erie Canal, begun in 1832 and completed from Toledo to Lafayette in 1843, brought German and Irish workers into the area. During the height of its use in the 1840's and 1850's, it distributed thousands of new settlers along its course. The canal boats carried grain to Toledo and brought back native and foreign immigrants.

Table 6. Population Growth of Fort Wayne and Allen County, 1830 to 1860.

Census	Year	Population of Fort Wayne	Population of Allen County
5th	1830	400*	996
6th	1840	2,030*	5,942
7th	1850	4,282	16,919
8th	1860	10,388	29,328

*Unofficial Estimates

In the area along the Wabash and Erie Canal from Fort Wayne to Toledo, the 1870 Census indicates that 8 to 15 per cent of the population was German.[17] The completion of the National Road to Indianapolis in 1834 stimulated migration from Pennsylvania and Ohio into central and northern Indiana. Likewise, the completion in 1854 of the Ohio and Indiana Railroad, which connected Fort Wayne with Crestline, Ohio, and cities farther east in Ohio and Pennsylvania, encouraged the growth of industry in Fort Wayne and the migration of people to the city from states directly east of Indiana.[18]

Concurrent with the development of transportation systems serving the Fort Wayne area, industrial growth generated a demand for a larger labor force. In 1839 the J. C. Bowser Company established a foundry and machine shop. The Bass Foundry and Machine Shop, manufacturer of railroad car wheels, began production in 1854, as did the Kerr Murray Manufacturing Company, which established a foundry. These companies and others afforded employment for semi-skilled and skilled German workers, many coming from Pennsylvania and others immigrating directly from Germany. Also providing employment for both German and French immigrants were the brewery companies of the city. C. L. Centlivre, an enterprising Frenchman from the Province of Alsace, began a brewery in 1864; and Herman Berghoff from Dortmund , Germany, started a similar business in 1887.

Population data for Indiana in 1850 show the effects of three great streams of migration moving into the Midwest. Comparisons of the per cent of the total number of immigrants who had migrated from other states into Indiana reveal distinctly different patterns for counties bordering Michigan, Allen County, and its neighboring counties to the south, and counties along the Ohio River. Table 7, adapted from Joseph Layton's "Sources of Population in Indiana, 1816 to 1850," presents evidence of these three streams of migration affecting settlement patterns in Indiana.[19]

Steuben and Lagrange Counties, bordering on Michigan, show thirty-seven and thirty per cent, respectively, of their inhabitants as having emigrated from predominantly Inland Northern dialect areas; Allen County, in the third tier of counties south of the Michigan border has twenty-one per cent; and Wells and Adams, bordering Allen County on the south, show only seven and five per cent from Inland Northern dialect areas. Thus these figures indicated a sharp decrease of Yankee penetration from the Michigan border southward into Indiana. On the other hand, Wells and Adams Counties show seventy-six and seventy-eight per cent, respectively, of their inhabitants as having emigrated from predominantly North Midland areas; Allen County has sixty-one per cent from North Midland areas and Steuben and Lagrange a smaller per cent of North Midlanders, forty-six and forty-nine per cent. Only a trickle of South Midland emigrants,

Table 7. Per Cent of Immigrants Migrating to Indiana from Foreign Countries and from Major Dialect Areas in the United States.

Counties	Per Cent of Total Immigrants Migrating to Indiana from Foreign Countries and States Representing Predominant Dialect Areas*			
	North Midland	Inland North	South Midland	Foreign
Along Mich. Border				
Steuben	46%	37%	.5%	4%
Lagrange	49%	30%	1 %	3%
3rd and 4th tiers south of Michigan Border				
Allen (3rd tier)	61%	21%	5 %	11%
Wells (4th tier)	76%	7%	3 %	2%
Adams (4th tier)	78%	5%	2 %	3%
Along the Ohio River				
Spencer	16%	2%	44 %	2%
Warrick	7%	7%	43 %	3%

*Since dialect areas cut indiscriminately across political boundaries, these data can be expressed only in terms of predominant dialects. For example, Ohio has been considered as predominantly North Midland,[20] though Inland Northern prevails in the northern areas and in such places as Marietta and Worthington, and South Midland dominates southern areas of the state.

one per cent or less, had reached extreme northern Indiana by 1850, and Allen County shows a weak South Midland migration of five per cent. Migration from South Midland dialect areas is evident in Spencer County's forty-four per cent and Warrick County's forty-three per cent. Since these figures do not reflect emigration prior to 1816, when southern Indiana was already being settled by South Midlanders, Warrick and Spencer Counties having a population density of six to eighteen inhabitants per square mile in 1820,[21] the predominance of South Midland in southern Indiana is not fully represented by these data.

Later United States Census data strongly substantiate the basic settlement pattern indicated for Allen County and Fort Wayne in Table 7. However, the later data indicate significant new streams of population flowing into the community. The next-to-last column of Table 8 shows a marked increase in foreign-born inhabitants between 1850 and 1870 and the last column a sharp increase in the Negro population after 1950.

Table 8 shows the continued dominance of the North Midland population, with a substantial element of Inland Northern and a much smaller representation of South Midland characterizing the pattern of population growth from the beginning of Fort Wayne's rapid expansion well into the Twentieth Century. However, it must be emphasized that the foregoing data are weighted in favor of the North Midland dialect.

As previously mentioned, the states of Ohio and Pennsylvania were counted in Tables 6, 7, and 8 as North Midland territory. Since Ohio contains rather extensive early settlements of both Inland Northern and South Midland population and inasmuch as approximately the northern one-fifth of Pennsylvania is Inland Northern territory, the importance of Inland Northern and South Midland dialects is undoubtedly greater than

Table 8.* Population Growth of Fort Wayne and Allen County, 1850-1967, Related to Major Dialect Areas and Minority Ethnic Groups.

Year	Fort Wayne & Allen Co. Pop.	Per Cent of Native Immigrants Born in Other States Representing Predominant Dialects			Per Cent of Total Pop. Foreign Born	Per Cent of Total Pop. Negro
		North Midland	Inland Northern	South Midland		
1850	16,919	61%	21%	5%	1.4%	1%
1870	43,428	68%	21%	3%	20 %	1%
1890	66,689	64%	18%	3%	16 %	1%
1910	93,386	66%	18%	3%	15 %	1%
1930	114,946**	--	--	--	5 %	2.1%
1950	133,607**	--	--	--	1.4%	1.7%
1960	161,776**	--	--	--	2.5%	7.4%
1967	172,592**	--	--	--	--	9.8%

*This table is based on data from United States Census Reports for the years listed.
**Fort Wayne only
--Data unavailable

the foregoing population data indicate for Fort Wayne and Allen County.

The strong flow of foreign-born immigrants, already beginning to manifest itself in Allen County in 1850, reached its peak between 1850 and 1870 and sharply declined thereafter. Table 9 indicates that German immigration accounts for more than half of the foreign-born population from 1850 through 1920, with the second largest group, small in comparison to the German group, being the French from 1870 through 1890, the Irish in 1910, and the Russians by 1930. Many other small groups of various nationalities, such as Spanish-American and Mexican-American, make up the remaining population of the foreign-born in Fort Wayne. With total per cent of foreign-born inhabitants reduced to five per cent by 1930, conditions would appear to be highly favorable for the acculturation process.

Table 9.* Foreign-Born Population of Fort Wayne, 1890-1930.

Number of Foreign-Born of a Given Nationality and the Per Cent of These Nationalities of the Total Foreign-Born Population in Fort Wayne

1870		1890		1910		1930	
German	French	German	French	German	Irish	German	Russian
5,347	1,157	8,477	697	5,599	449	3,386	174
61%	13%	72%	7.7%	58%	4.7%	51%	2.6%

*This table is based on data from United States Census reports for the years listed.

The last column of Table 8 suggests further variation and complexity in the dialect patterns of Fort Wayne. The Negro population increased from 2,487 in 1950 to 16,896 in 1967 or to nearly ten per cent of the total population. This generous stream of southern migrants provides the first major infusion of Southern dialects into this community. Thus the population history of Fort Wayne and Allen County predicts a transition speech area with competing forms existing side by side in this community.

End Notes

1. Stuart Robertson, *The Development of Modern English* (New York, 1939), pp. 220-221.
2. Wallace E. Stegner *et al.*, *Modern Composition, Book 4*, (New York, 1964), pp. 580-581.
3. Hans Kurath, *A Word Geography of the Eastern United States* (Ann Arbor, 1949), p. 11.
4. H. L. Mencken and Raven I. McDavid, Jr., *The American Language* (New York, 1963), pp. 454-456.
5. Raven I. McDavid, Jr., "American English Dialects," *The Structure of American English*, W. Nelson Francis (New York, 1963), pp. 511-512.
6. *Ibid.*, pp. 482-485.
7. Ibid., pp. 502-505.
8. Writers' Program of the Work Projects Administration, *A Guide to the Hoosier State* (New York, 1941), pp. 48-56.
9. Stephen S. Visher, *Economic Geography of Indiana*, (New York, 1923), pp. 21-24.
10. Writers' Program of the Work Projects Administration, *The Ohio Guide* (New York, 1940), p. 560.
11. Writers' Program of the Work Projects Administration, *loc. cit.*
12. Robert S. Robertson, *History of the Maumee Basin*, (Fort Wayne, 1910), pp. 29-30.
13. *Ibid.*, pp. 32-33.
14. *Ibid.*, pp. 39-40.
15. *United States Census*, 1930, p. 264.
16. McDavid, *op. cit.*, p. 484.
17. *Indiana's Canal Heritage* (Fort Wayne, 1954) pp. 18-20.

18. B. J. Griswold, The Pictorial History of Fort Wayne, Indiana (Chicago, 1917), p. 407.

19. Joseph E. Layton, "Sources of Population in Indiana," Bulletin of the Indiana State Library, Vol. XI, No. 3, (Indianapolis, 1916), p. 3.

20. Kurath, op. cit., p. 28.

21. Hans Kurath and Raven McDavid, Jr., The Pronunciation of English in the Atlantic States (Ann Arbor, 1961), Map 3.

CHAPTER III

PHONOLOGICAL VARIANTS AS POTENTIAL SOCIAL MARKERS

Almost universally in our country, differences in grammar are assumed to reflect social differences. The validity of this assumption is supported by linguistic scholarship. Atwood in *Verb Forms in the Eastern United States*, a derivative study based on Linguistic Atlas data for the Eastern States, concludes that verb usage is sharply divided along social lines.[1] On the other hand, differences in pronunciation until rather recently have been generally conceived as reflecting regional rather than social differences. McDavid, in an article which first appeared in *Language Learning* in 1952-53,[2] marshalls evidence to demonstrate that variations in pronunciation likewise connote social status in our country and, consequently, deserve the attention of English teachers in the public schools. But for the teacher, dedicated to the task of helping every individual realize his potentialities as a social being, the problems of social differences of pronunciations are complex and remain to a large extent unresolved. The lines of attack, however, are clearly defined in the McDavid article. To help teachers deal effectively in the classroom with the problems of social differences in pronunciation, McDavid suggests certain practical procedures not yet fully exploited:

1. Teachers should become fully aware of and sensitive to the prestigious pronunciations in the community as well as significant deviations from these standard forms.
2. They should also learn to recognize types of pronunciations which are socially acceptable in other regions of the country but which deviate from the local norms.
3. Teachers should establish instructional priorities in teaching pronunciation, avoiding wasted energy on imagined "elegant" forms and concentrating on those deviations which are most likely to interfere with the life possibilities of individuals in the local community and in broader contacts in other regions of the country.

But in addition to the practical importance of investigating the pronunciation patterns of a local community and the relationship of these patterns to other regions, a study of phonological characteristics of speech of a community has its own justification. Every dialect has its intrinsic worth as a means of human communication and is worthy of study. Particularly is this true in a dialect transition area, such as Fort Wayne, where competing forms of pronunciation in the basic population are likely to exist alongside new pronunciations introduced by recent immigrants from other regions of the country. The purpose of this chapter, then, is to describe for a fairly typical Northern industrial community potentially significant social differences in pronunciation.

Kurath identifies three types of differences in pronunciation:[3]

1. Differences in the system of phonemes.
2. Differences in the phonic character of individual phonemes.
3. Differences in the incidence of phonemes in the vocabulary.

The Phonemic System

In delineating social and regional variations between dialect areas, dialectologists agree that recognizing differences in the system of phonemes is of prime importance. These differences in American English, however, are relatively few.[4] On the other hand, many subtle variations do occur in the phonic quality of phonemes, especially vowels. Likewise, differences in the incidence of phonemes in the vocabulary occur commonly in American dialects. Because the basic intent of this study is to deal with implications for teaching language, this chapter will concentrate on the phonic quality and incidence of phonemes, areas in which considerable variation occurs in American dialects.

Nevertheless, some consideration must first be given to the basic phonemic system, with a cautious eye on the dangers of allowing a rigorous system to make us overlook or completely disregard varieties of pronunciation.[5] The distribution of phones in the idiolects of three cultured native informants representing the young, middle aged, and elderly groups was examined in reference to the unitary system of phonemic classification described by Kurath in _The Pronunciation of English in the United States_.[6] This system classifies stressed vowels as "free" or "checked" segments, and diphthongs as unit phonemes. Free stressed vowels occur both before consonants and in word-final positions, for example, as the vowel sound occurs before the consonant in _feet_ and in word-final position in _three_. Checked vowels in stressed position, on the other hand, occur only before consonants, for example, the vowel sounds in _rib_, _bend_, _wood_, and _sag_. Kurath's interpretation of the diphthong, the interpretation used in this study, is that it is composed of unit phonemes rather than a syllabic nucleus followed by an unsyllabic element. Vowels in unstressed or weakly stressed syllables in Kurath's scheme of phonemicization include the free vowel / ə / in such words as sofa; the checked / I /, as in laughing, and the free vowels / i, u, e, o /, as in funny, value, Wednesday, and borrow; and free / ɜ / as in father, found only in dialects that have the postvocalic / r /. The phonemic system for consonants presents no problem in American English except that in dialects which do not preserve the postvocalic / r / an additional consonant / ə̯ / must be included to account for the phone derived from the loss of the / r / in such words as four.[7] Since / ə̯ / does not occupy the peak of a syllable, it must be differentiated from the vowel / ə /, which does, of course, occur as a syllabic nucleus.

Based on the distribution of the phonic features in the speech of the three cultured informants in relation to the phoneme categories established by Kurath, I have set up the following system of phonemes for the speech of the Fort Wayne community:

1. Free vowel phonemes: / i, u, e, ɜ, ə, ɔ, o, aI, aU, ɔI /, as in tree, true, today, sermon, about, saw, boat, dive, crown, and oil.
2. Checked vowel phonemes: / I, U, ɛ, ʌ, æ, ɑ /, as in bit, pull, bet, cut, ask, and lot.
3. Consonants:
    a. Stops: / p, b, t, d, č, ǰ, k, g /, as in pen, bob, ten, dog, church, judge, care, and go.
    b. Fricatives: / f, v, θ, ð, s, z, š, ž, h /, as in fan, vine, thin, these, sing, zinc, shoe, pleasure, and home.
    c. Sonorants: / m, n, l, r, ŋ /, as in mat, new, look, row, and sing.
    d. Semivowels: / w, j /, as in water and yellow. The mid-central semivowel / ə̯ / must be added to account for the sound which regularly replaces / r / in four in the speech of recent cultured as well as uncultured arrivals from "r-less" dialect areas.

Although phones in the range of low-front [a] and low-back [ɒ] are heard sporadically in Fort Wayne speech, especially in idiolects not preserving postvocalic / r /, these variations can be economically treated as allophonic variations of / ɑ /. In cultivated speech in this community, there appears to be no contrast between *balm* and *bomb*, both having the phoneme / ɑ /. Phones in the range of high central / ɨ / are heard frequently in unstressed position, but these phones can be classified as allophones of mid-central / ə / or lower high-front / ɪ /. All cultured informants interviewed distinguish *cot* with / ɑ / from *taught* with / ɔ /. Very few cultivated informants (four of twenty-three) distinguish *mourning* with / o / from *morning* with / ɔ /. The checked mid-back vowel / θ / heard in New England in *stone*, was heard in the speech of only one informant, A17.

Phonic Variations of Individual Phonemes

As McDavid points out, variations in the pronunciation of individual phonemes in American English are difficult to detect and evaluate; yet phonemes, particularly vowels, do exhibit marked phonic variations and some of these variants do indicate social status.[8] In a dialect transition area, further complicated by recent **immigration into the community of minority ethnic groups**, a study of phonic variations of phonemes should (a) give some insight into what happens to dialects in competition, (b) identify potential social markers in the speech of ethnic minorities, and (c) indicate some of the points of interference between the standard dialect and nonstandard dialects.

Sawyer, in a study of the speech of San Antonio, Texas, also a dialect transition area, found that the impact of Mexican Spanish on the prestigious dialect of the community was slight.[9] Her investigation also affords insight into the problems a speaker whose first language is Mexican Spanish will have in mastering English. These problems she identifies for the Latin-American as:

1. Difficulties in attaining the proper quality distinctions in the English vowel system.
2. Failure to make off-glides so characteristic of English vowels.
3. Difficulty in producing certain consonant sounds which are not found in Mexican Spanish or which conflict in the two language systems.

In a phonemic analysis of Mexican Spanish spoken by two natives of Mexico, King provides insight into the difficulties the Latin-American has in attaining proper phonic distinctions in English vowels.[10] King identifies vowel sounds clustering around five phones: [i, e, a, o, u]. Vowels in these ranges he assigns to the phonemes / i, e, a, o, u /. Since the English vowel system requires finer distinctions (sixteen phonemes in the standard dialect of Fort Wayne), the Mexican American will obviously find some of the English sounds difficult to produce.

Another significant study of urban speech is Williamson's investigation of the Negro dialect in Memphis. She concludes that the speech of Black-Americans is not a distinct entity and that differences between Anglo-American and Black-American speech are primarily caused by differences of social, economic, and educational conditioning.[11] Clearly, the comparison of the speech of cultured Anglo-Americans with the speech of unsophisticated Black-Americans is unscientific and unfair. In the following discussion in which comparisons of ethnic groups are made their social classes will be identified.

Phonetic Symbols Used in This Study

To facilitate relating the data gathered in this Northeastern Indiana community to Linguistic Atlas data, I selected symbols from the modified IPA system of phonetic notation described in the *Handbook of Linguistic Geography of New England*.[12] The selection of symbols was determined by the number of significant phonetic variations I was able to hear in the idiolects of the fifty informants.

The phonological values of the following symbols are defined in key words as these words are usually pronounced by native speakers of standard English in the North Central States. However, phones, especially vowels, cannot be adequately illustrated to informants of various dialects by the use of key words. Thus, a description of the configuration of the vocal organs in producing these sounds is useful.

Vowels. The classification of vowels is based upon (1) the position of the highest surface of the tongue in the oral cavity (front, central, or back), (2) the height of the tongue (high, mid, or low), (3) the degree of lip rounding, and (4) the degree of tenseness or laxness of the tongue:

[i], a high front tense vowel as in *beat*

[I], a lower high front lax vowel as in *bit*

[e], a mid front tense vowel as in *bait*

[ɛ], a lower mid front lax vowel as in *bet*

[æ], a higher low front tense vowel as in *bat*

[a], a low front lax vowel, the so-called "broad *ɑ*", heard in the Fort Wayne community occasionally as the first element in the diphthong / aI / and infrequently in the word *aunt* as pronounced naturally in Boston

[ʉ],	a high central tense rounded vowel as occasionally heard in *music*
[ɨ],	a lower high central lax vowel as in the second syllable of *candid*
[ə],	a mid central lax vowel occurring in unstressed syllables as in *sofa*
[ɚ],	a mid central retroflex vowel occurring in both stressed and unstressed syllables as in *bird* and *father*
[ɜ],	a mid central vowel heard in such words as *bird* when pronounced without retroflexion
[ɑ],	a low central lax vowel as in the first syllable of *father*
[u],	a high back tense rounded vowel as in *boot*
[ʊ],	a lower high back lax rounded vowel as in *put*
[ɤ],	an advanced lower high back unrounded vowel heard as a variant of / ʊ / in *good*
[o],	a mid back tense rounded vowel heard in *boat*
[ɵ],	an advanced higher mid back weakly rounded vowel heard rarely as a variant of [o] in such words as *coat* and *home*
[ʌ],	an advanced lower back unrounded vowel occurring in stressed syllables as *cut*
[ɔ],	a higher low back rounded vowel as in *caught*
[ɒ],	a low back weakly rounded vowel heard rather infrequently in *water*
[ɣ],	a low back unrounded vowel heard occasionally in *log*

Diacritics for fronting, backing, raising, or lowering of vowel positions are [< > ^˅]. For example, [ɑ<] represents the low central vowel articulated in a more advanced (forward) position than the unmodified variety [ɑ]; [o ^] indicates a mid back vowel articulated in a higher position than [o].

The diacritic for length is [·]. For example, [ɑ ·] indicates a distinctly long vowel.

The diacritic for indicating a shortened vowel is [˘]. The breve above a vowel [ă] indicates a vowel appreciably shorter than its normal duration.

The diacritic for retroflexion or "r-color" is [̣]. Placed under a vowel [ạ], this diacritic indicates the acoustic effect of "r-color" produced by raising the tongue tip or laterally contracting the tongue.

The diacritic for nazalization [˜] is placed above the vowel.

A short vowel heard as a mere glide is represented by a superior letter [fɑ·ᶦv].

The diacritic for unvoicing is [˳].

Syllable division indicated only when two contiguous vowels belonging to separate syllables might be interpreted as a diphthong [ri-əl]

Consonants. The consonants are classified in terms of (1) whether they are voiced or voiceless, (2) where they are articulated, (3) what kind of stricture is involved in articulation:

[p], a voiceless bilabial stop as in *pep*

[b], a voiced bilabial stop as in *bill*

[β], a voiced bilabial fricative occasionally heard in the speech of Latin informants

[t̪], a voiceless dental stop occasionally heard in the speech of Latin informants

[t], a voiceless apico-alveolar stop as in *tap*

[d], a voiced apico-alveolar stop as in *dead*

[k], a voiceless velar stop as in *cake*

[g], a voiced dorso-velar stop as in *go*

[ʔ],	a glottal stop made by a closed position of the vocal cords as in the negative expression huh-huh
[m],	a voiced bilabial nasal as in mama
[n],	a voiced apico-alveolar nasal as in no
[l],	a voiced apico-alveolar lateral, a "clear" l, as in look
[ɫ],	a voiced apico-alveolar lateral with dorso-velar coarticulation, a "dark" l, as in gull
[ɾ],	a voiced alveolar flap often heard between vowels as in butter
[f],	a voiceless labio-dental fricative as in fat
[v],	a voiced labio-dental fricative as in vat
[θ],	a voiceless apico-dental fricative as in three
[ð],	a voiced apico-dental fricative as in this
[s],	a voiceless apico-alveolar sibilant as in sun
[z],	a voiced apico-alveolar sibilant as in zoo
[tʃ],	a voiceless apico-alveolar stop as in chair
[dʒ],	a voiced apico-alveolar stop as in judge
[ʃ],	a voiceless fronto-palatal sibilant as in shave
[ʒ],	a voiced fronto-palatal sibilant as in pleasure
[h],	a voiceless glottal fricative as in head
[w],	a frictionless velar continuant with rounded lips as in white
[r],	a voiced apico-alveolar frictionless continuant as in run
[ɹ],	a fricative slit spirant articulated by the tongue tip as in try.
[r̃],	a voiced alveolar tongue trill heard in speech of the Latin informants.
[j],	a voiced frictionless palatal continuant as in yield
[ə̯],	a mid-central consonant derived from postvocalic / r / in dialects not having the postvocalic / r /

[ŋ], a voiced velar nasal continuant as in sing

Diacritics used to indicate more exact phonetic value of consonants are the following:

Diacritic for unvoicing [l̥]

Diacritic for voicing [t̬]

Diacritic for retroflection [ə̣]

Diacritic for nasalization [ñ]

Diacritic for aspiration [k^c]

Diacritic for primary stress [ˈ]

Diacritic for secondary stress [ˌ] (Diacritics for stress are not used in this study except when the stress pattern for a word deviates from that of the usual pattern.)

/ i /

The free vowel phoneme / i / as in SAE (Standard American English) beat and three occurs in checked position as two phonic types in the Fort Wayne speech sample: an upgliding diphthong [Ii ~ ij] and a monophthong [i ~ i·] (Table A1).

In the Anglo-American speech, the upgliding diphthong [Ii] occurs frequently, ranging from a lowered beginning [Ii] in the speech of A12 to a close beginning [ij] in A3. The monophthongal variety [i] in infrequent, occurring only in the speech of A10, A14, and A18.

The upgliding diphthong [Ii] clearly predominates in the Black-American speech sample. It ranges from a lowered beginning [I ˇ i] in the speech of B36 to a close beginning [i ˇ i] in speech of B23, B26, B27, and others.

In contrast to the upgliding diphthong for / i / characteristic of the Anglo-American and Black-American speech sample, the Latin-Americans use the monophthongal [i·] or [iˇ·]. On the basis of King's vowel chart for Mexican Spanish,[13] these free phones in the Latin informants' speech are similar to Spanish [i]. Only L42, a native of the community, has an upgliding diphthong [Ii] in *greasy*.

The phoneme / i / in final position under stress, as in *three*, displays a similar pattern of phonic variation in the three ethnic groups.

Figure B1, based on field records of the North Central States Linguistic Atlas project, shows allophonic variations for / i / in the area surrounding Fort Wayne to be similar to those found in the Fort Wayne community. The social classes of the informants whose pronunciations are represented in Figures B1 through B18 are the Linguistic Atlas Types I and II. Type I is typically a person of little formal education and restricted social contacts, and Type II is a person usually having a high school education and wider reading experiences or broader social contacts. In the following discussion, I shall occasionally use the term "popular" usage to describe the pronunciation of these informants.

Since the Negroes recently arriving in the community have the upgliding phone for / i /, this particular phoneme in Negro speech presents no problem of deviation from the standard of the community and surrounding area. Likewise, the Mexican-American monophthongal variant of / i / presents little contrast to the native / i /.

/ I /

The checked vowel phoneme / I / as in SAE *bit*, *chimney*, and *whip* occurs as three phonic types in the Fort Wayne speech sample: [ɪ ∿ ɨ],

[Iᵊ ∿ ɨᵊ], and [i ∿ i·].

In the Anglo-American speech, the monophthongal variety [I] predominates while centralized [ɨ] occurs rather infrequently; e.g., A6 and A11 in whip (Table A2). The ingliding diphthong [Iᵊ] is distributed across all social classes but with greater frequency in the lower-class groups. A4 in the upper middle class has the diphthong [Iᵊ] in whip as do A12, A13, A17, and A19.

Monophthongal [I] and diphthongal [Iᵊ] occur with equal frequency in the Black-American speech sample. However, the inglide is particularly evident in the speech of Negroes who are recent arrivals, e.g., B32, B33, B34, and B35, from Alabama, Mississippi, Louisiana, and Florida.

In the speech of the Latin-Americans, the phone types [Iˆ] and [iˇ ∿ i·] prevail. Four of the Latins use the raised phone [Iˆ] and six use some variant of the phone [i] in whip. A similar pattern appears in chimney (Table A24). The phone [i] occurs more frequently among the less educated Latins, indicating that they have not mastered the distinction between / I / and / i /. As King points out,[14] this difficulty occurs because [I] is an allophone of / i / in Mexican Spanish.

Figure B2 shows allophonic variations of / I / in the area surrounding Fort Wayne to be primarily of the monophthongal type [I ∿ ɨ] with an infrequent occurrence of the inglide [Iᵊ]. Since the diphthong [Iᵊ] occurs, though rather infrequently, in educated Black and Anglo speech, it appears unlikely that this feature in the speech of the Negroes who are recent arrivals is a social indicator. However, the use by Latins of the phone [i] instead of [I] for the phoneme / I / contrasts with the standard usage of Fort Wayne and the surrounding area and may have critical social significance for its users.

/ ɛ /

The checked vowel phoneme / ɛ / as in SAE *chest*, *chair*, *eggs* and *ten* occurs as monophthongal [ɛ] and [I], ingliding diphthong [ɛ^{ə}], and upgliding diphthong [ɛ^{ɨ} ∿ ɛɨ ∿ e^{ɨ} ∿ eɨ] in the Fort Wayne speech sample.

In the Anglo-American speech, the monophthongal [ɛ ∿ ɛ˄] predominates, especially in the prestigious dialect as evidenced in the pronunciation of *eggs* (Table A3), and *chest* (Table A4). In the upper middle-class sample, the raised phone [ɛ˄] in *eggs* occurs in seven of the eight idiolects and in *chest* in five of the eight upper middle-class idiolects. Before / r / in *chair* (Table A5), varieties of the monophthongal phone type [ɛ ∿ ɛ˄ˑ] are distributed across all social levels. Likewise, the ingliding diphthong [ɛ^{ə}] occurs in all Anglo-American social classes in the words *chest*, *eggs*, and *ten* (Table A4), but with lower frequency than the phone [ɛ ∿ ɛ˄]. Upgliding [ɛ^{ɨ} ∿ eɨ] in *eggs* occurs only in the lower social levels of the Anglo-American speech sample.

In the Black-American speech, the ingliding [ɛ^{ə}] clearly predominates in *chest* and *ten* and upgliding [ɛ^{ɨ} ∿ e^{ɨ}] in *eggs*. In the speech of those informants who have the constricted phone [ɚ], e.g., in *chair*, the phone [ɛ ∿ ɛ˄] before [ɚ] prevails. On the other hand, a variety of phones occur before the weakly constricted phone [ə̣] and the unconstricted phone [ə], including [Iˑ] for informants B32, B33, and B36 and [eˑ] for informants B38 and B39.

Generally, the phone coming before the weakly constricted [ə̣] or unconstricted [ə] is lengthened as in B38's pronunciation of *chair* [t͜ʃe·ə]. The phone [I] occurs rather frequently in *ten*, particularly in the speech of the recent Negro arrivals, for example, B34, B35, and B36. The distribution of the [e˙], and [I·] before / r / in *chair* and [I] in *ten*, is restricted to lower-class Negro groups; thus these phones constitute potential social markers.

Most of the Latin-Americans use the monophthongal [ɛ], usually raised, in *ten* and *chest*; and all of them use [ɛ] in *chair*. L47 and L49 use the phone [I] in *chest* and L49 uses [I] in *ten*. According to King's chart of Mexican-Spanish vowels, the phone [ɛ] in Mexican Spanish is phonetically very close to the English phone [ɛ]. Latin variants of / ɛ / observed in the speech sample present little contrast to native variants of this phoneme, except for the occurrence of [I], which does contrast phonetically with the prestigious usage of the community. Furthermore, Linguistic Atlas data for the North Central states (Figure B3) shows the predominance of monophthongal [ɛ ∿ ɛˆ] in the area surrounding Fort Wayne, with upgliding [ɛᵋ ∿ ɛᶤ] a competing form and virtually no occurrence of [I], for the phoneme / ɛ / in the word *ten*. Thus, the allophonic [I] for / ɛ / before / n / may be a social marker in this community.

/ e /

The free vowel phoneme / e / as in SAE *April*, *ate*, and *day* occurs in the Fort Wayne speech sample as a monophthong [e ∿ e·] and as an upgliding diphthong of two varieties, [eᵻ ∿ eᶤ] and [ɛᵻ ∿ ɛˆᵻ].

In the Anglo-American speech sample, the upgliding diphthong [eɨ] prevails in both checked and free positions. Table A6, showing the occurrence of phones of / e / in syllable-**initial position in *April***, records an overwhelming use of [eɨ]. The only variant in the Anglo-American sample is the diphthong with a lower beginning [ɛɨ] in the speech of A11 and A17. In checked position, as in *afraid*, only sporadic deviation from [eɨ] occurs, A8 and A10 having monophthongal [e˙].

Likewise, in the Black-American and Latin-American speech samples, the diphthong [e˙ɨ] prevails, with the only deviations being [e˙] used by B35 and B38, recent Negro arrivals from Tallahasse, Florida, and Charleston, South Carolina.

Figure B4 shows the tendency of the upgliding diphthong [eɨ] to prevail in the area surrounding Fort Wayne. However, there is a rather striking frequency of the [ɛɨ] diphthong in the Indiana field records. Considering the predominance of the [eI] and [e] in the Ohio and Michigan records for localities bordering Indiana and the irregular patterning of the [ɛɨ] without apparent correlation to population settlement history, I believe there is good reason to question the accuracy of certain northern Indiana field records.

/ æ /

The checked vowel phoneme / æ / as in SAE *ashes*, *ran*, and *began* occurs in the Fort Wayne speech sample as two monophthongal phone types [æˇ ∿ æ^] and [ɛˇ ∿ ɛ^] and two diphthongal varieties, an upgliding variant [$æ^{ɛ}$ ∿ $æ^{ɨ}$] and an ingliding type [$æ^{ə}$] (Table A7).

In the upper middle-class sample of Anglo-American speech, the raised phone [æ^] predominates. The upglide diphthong [$æ^{ɨ}$] and the inglide [æᵊ] occurs along with the monophthongal [æ ∿ æˆ] in the other Anglo-American idiolects. However, in the entire Anglo-American sample, the phone [æˇ ∿ æˆ] occurs much more frequently than the diphthong forms.

In the Black-American speech, the frequency of the diphthong variants is much higher than that of the monophthongal varieties. Both ingliding and upgliding forms occur, especially among the Negroes who have settled in the community recently. In the upper middle-class sample of Black-American speech, both monophthongs and diphthongs occur, B22, B23, and B25 having [æˆ, æˑ, æˇˑ] and B21, B24, and B26 using [æˇᶦ̆, æˆᶦ̆, æˆᶦ̆].

An examination of the Latin-American speech sample for the types of phones occurring in the position of / æ / in ashes reveals the raised [æˆ], typical of upper middle-class usage in the community, occurring in the speech of three informants, L42, L44, and L45. On the other hand, the remaining seven Latin informants use the phone values in ashes of the monophthongal variety [ɛˇ ∿ ɛˆ] and upgliding diphthongal type [ɛᶦ̆]. Since / æ / does not occur in Mexican Spanish, it appears that the seven informants are substituting the Spanish allophone [ɛ] for [æ]. Except for L41 and L43, who have the upgliding [ɛᶦ̆], the Latins who fail to distinguish / ɛ / and / æ / have less education and more restricted social and cultural relations than do L42, L44, and L45.

Figure B5 shows allophonic variations of / æ / in the area surrounding Fort Wayne to be primarily of the monophthongal type [æˇ ∿ æˆ ∿ æˑ] with rare occurrences of upgliding and ingliding phones [æᵋ ∿ æᶦ̆] and [æᵊ]. Thus, the phones [ɛ] and [ɛᶦ̆] for the phoneme / æ / are potential social markers in the Fort Wayne community and surrounding area.

/ ɑ /

For the checked vowel phoneme / ɑ / as in SAE *palm*, *father*, and *hospital*, the speech sample of the Fort Wayne community has the monophthongal phone [ɑ$^{<}$ ∿ ɑ$^{\wedge}$ ∿ ɑ ∿ ɑ$^{>}$] and the ingliding diphthong [ɑ^{ə}]. These phones occur in the speech of all social classes and all ethnic groups with the exception of the centering diphthong which does not occur in the Latin speech sample. However, all Latins do use the phone [ɑ], indicating a satisfactory control of the phoneme / ɑ /. The ingliding [ɑ^{ə}] occurs most frequently before *m*, e.g., in *palm* in the speech A6, A7, A8, A12, B29, B30, B31, and B34. There is a tendency for the phone [ɑ] to be fronted before / r / (Table A8) as in *tomorrow*. The phones of / ɑ / often have length, as in *hospital* in the speech of A3, A19, B26, B31, L44, L46, and L48.

Figure B6, which gives the occurrence of phones before / r / in *tomorrow* for the area surrounding Fort Wayne, indicates the predominance of [ɑ$^{<}$ ∿ ɑ ∿ ɑ$^{>}$] before / r /. The phones before / m / in *palm* show a considerable range of phonic types and phonemic incidence; nevertheless, the centralizing diphthong [ɑ^{ə}] and the monophthongal [ɑ] are well distributed in the surrounding area. The occurrence of [ɑ$^{<}$ ∿ ɑ ∿ ɑ$^{>}$] and [ɑ^{ə}] across social classes and ethnic groups in the Fort Wayne community and the frequent occurrence of these phones in the popular speech of the surrounding area indicate that allophonic varieties of / ɑ / within the three ethnic groups sampled are not social indicators in the community.

/ u /

The free vowel phoneme / u / as in SAE tube, two, and booth occurs in the Fort Wayne speech sample as three phone types: a monophthong [ʉ ~ u], an upgliding diphthong [ʊu], and a diphthong with a high-central beginning [ʉu] (Table A9).

The high-back monophthongal [u] predominates in the Anglo-American speech sample, especially in the upper middle-class, although it is distributed across all social levels. Upgliding [ʊu] also occurs frequently throughout all social levels, but with greater frequency in the lower-class groups. [ʉu] is rare in the Anglo speech sample.

In Black-American speech, the phone [ʉu] competes strongly with monophthongal varieties [ʉ ~ u]. The upgliding phone is particularly evident among the recent Negro arrivals, e.g., in the speech of B26, B27, B29, B32, and B38. The distribution of the high-central [ʉ] and high-back [u] indicates a greater frequency of [u] among indigenous Negroes, e.g., B22 and B28, and a greater frequency of [ʉ] among the recent arrivals, for example, B31, B33, and B35.

The salient feature of the Latin-American speech sample for the phoneme / u / is the overwhelming use of the high-back [u] and almost complete absence of off-glide phones with the exception of L44 who has a diphthong with a high-central beginning in two and tube. King's analysis of Mexican Spanish places the phone [u] for the Spanish phoneme / u / close to the high-back position of the phone [u] in use in the prestigious dialect of the Fort Wayne community. Thus, one can anticipate no interference in the Latin-Americans' use of the phoneme / u / with the standard use of this phoneme in the Fort Wayne community.

On the other hand, the diphthong [ɨu] in the speech of recent Negro arrivals, particularly when it follows [j] in such words as new, due, and Tuesday, for example, B32 and B38, may be a social marker in this community.

/ ʊ /

The checked vowel phoneme / ʊ / as in SAE push, foot, and pull occurs in the Fort Wayne speech sample as the following phone types: a monophthong [ʊ˅ ∿ ʊ˄ ∿ ʊ$^{<}$] and [u· ∿ u˅·] and [ʉ]; an ingliding diphthong [ʊ^{ə}]; and rarely as an upgliding diphthong [ʊ^{ɨ} ∿ ʊ^{u}] (Table A10 and Table A11).

In Anglo-American speech, the monophthongal [ʊ] and ingliding [ʊ^{ə}] prevail and are distributed across all social levels. The inglide is common before / ʃ / in such words as push but infrequent before / l / in pull. The lower high-back [ʊ] is common in the speech of native Anglo-Americans while the centralized [ʉ] is rare. A13 has the deviant [u˅·] in both push and pull.

The Black-American speech sample shows a striking predominance of the inglide [ʊ^{ə} ∿ ʉ^{ə}] with infrequent occurrence of the upglide [ʊ^{ɨ}]. Centralized [ʉ^{ə}] occurs in push and pull in the speech of recent Negro arrivals, e.g., B35 from Florida and B39 from Alabama. Monophthongal [ʊ], often fronted, is less frequent in the Black-American than in the Anglo-American speech sample.

The phone [u· ∿ u˅·] predominates in the Latin-American speech in the lower social levels, for example, L47, L48, L49, L50, while raised [ʊ˄] generally occurs in the speech of the Latin-Americans who have a wider range of social relations and more education, e.g., L41, L42, L44, and L45. No evidence of off-glides for / ʊ / is present in the speech of these Latins. Since the phoneme / ʊ / does not occur in Mexican Spanish, but the phoneme / u / does, the use of the phone [uˑ ∿ $u^{\vee}$] for the English / ʊ / by those Latin-Americans having restricted social and educational opportunities is evidence of their not mastering the distinction between / ʊ / and / u /. L44 and L49, for example, have spent several years in the migrant stream, working with their husbands in harvesting crops.

Figure B7 shows that the high-back monophthong [ʊ] for the phoneme / ʊ / prevails in popular speech in the area surrounding Fort Wayne. The ingliding diphthong [$ʊ^{ə}$] is also fairly common, but centralized [ʉ] and the phone [u] are rare. Thus, the sharpest deviations from prevailing phonic types for / ʊ / in the surrounding area and from the standard types in Fort Wayne are the use of the centralized [ʉ ∿ $ʉ^{ə}$] by recent Negro arrivals and [uˑ ∿ $u^{\vee}$ˑ] by lower-class Latins. These deviations are potential social markers.

/ o /

The free vowel phoneme / o / as in SAE *road*, *yolk*, *hotel*, and *ago* occurs in the Fort Wayne speech sample as three phonic types: a monophthongal [o ∿ oˑ], an upgliding diphthong [oʊ ∿ $o^{ʊ}$], and an ingliding diphthong [$o^{ə}$] (Table A12).

In the Anglo-American speech sample, the upgliding [oʊ ∿ $o^{ʊ}$] in checked position is clearly the norm for / o / across all social levels. A sporadic occurrence of ingliding [$o^{ə}$] in the speech of A2 and A17 and upgliding [$ɔ^{U}$] in All are the only deviations from the upgliding

[oʊ]. In the unstressed position, as in window, the upgliding [oʊ] still predominates, occurring in approximately seventy per cent of the idiolects in the sample while [ə] occurs in ten per cent and monothongal [o] in twenty per cent of the Anglo-American idiolects sampled.

The Black-American speech sample also indicates the predominance of the upgliding [oʊ] for / o / while only two informants, B33 and B38, recent arrivals from Mississippi and South Carolina, use the ingliding [o^{ə}]. A phonemic substitution of / ɔ / for / o / in yolk takes place in the speech of B27 and B29, occurring as [ɔ·ʊ] and [ɔ·].

In the Latin-American idiolects, the upgliding [oʊ] occurs along with monophthongal [o· ∿ oˆ·]. The [oʊ] prevails in the speech of those Latins having wider social and cultural contacts and a higher level of education, as in the speech of L41, L42, L43, L44, and L45, while [o· ∿ oˆ·] occurs in the idiolects of those having more limited contacts and less education, e.g., L47, L48, and L50.

Figure B8 shows the prevalence of upgliding [oʊ] for / o / in checked position throughout the area surrounding Fort Wayne, confirming the occurrence of this phone in the Fort Wayne community. Thus, ingliding [$\overset{ə}{o}$], characteristic of the speech of some recent Negro arrivals, may be a social marker.

Since Mexican Spanish has only the [o] phone for the phoneme / o / and its acoustic quality is defined by King as approximately the English [o], which rarely occurs as the stressed free vowel in English of this community, the Latins using [o] instead of [oʊ] may find this usage to be a social marker.

/ ɔ /

The major phone types for the free vowel phoneme / ɔ / as in SAE dog, taught, and law in the Fort Wayne speech sample are the ingliding diphthong [ɔ^{ə}] and the monophthongal [ɔ]. Minor phone types for this phoneme are monophthongal [ɑ] and [ǒ] and diphthongal [pɔ], [p^{ə}], and [ɔ^{U}] (Table A13).

In the Anglo-American speech, the ingliding [ɔ^{ə}] in checked position, as in dog, predominates, particularly in the upper middle-class sample although this phone is distributed across all social classes. Monophthongal [ɔ] is in fairly common use, while [pɔ], [p^{ə}], and [ɔ^{U}] occur rarely. The inglide is even more pronounced for / ɔ / in the stressed open position with nearly seventy per cent of the sample having the centering diphthong [ɔ^{ə}] in saw.

Basically the same pattern of phones occur for / ɔ / in the Black-American speech sample except that the recent arrivals show a higher occurrence of the upgliding diphthong [pɔ].

For the Latin-Americans, the distribution of phones for / ɔ / is strikingly different, except for L41 and L42, who have monophthongal [ɔ] in checked position as in dog. L43, L46, L47, and L50 have [o· ∿ ǒ·] and L48 and L49 use [ɑ͐]. The only Latin informants having an off-glide for the phoneme / ɔ / are L44 and L45, who use [o^{U}] in the checked position in dog.

Figure B9 and Figure B10 show for the area surrounding Fort Wayne the occurrence of phones for / ɔ / in checked position in dog and in free position in saw. Both [ɔ^{ə}] and [ɔ] occur frequently and usually with length in checked position. The phones [p^{ə} ∿ p^{U}] also are reported. McDavid's transcriptions for / ɔ / in free position in *saw* report in three instances vowels having length and a centering off-glide [ɔ·^{ə}]. Thus, the popular speech of the surrounding area and the standard dialect of the community indicate the prevalence of the phones [ɔ ∿ ɔ·] and [ɔ·^{ə}] for the phonene / ɔ /. The most striking variation from these phone types for / ɔ / is found in the Latin-American speech sample, which has infrequent use of the off-glide and frequent substitution of [ɑ$^{>}$] and [o· ∿ ǒ·] for the commonly used phones.

/ ʌ /

The checked vowel phoneme / ʌ / as in SAE *husband* (stressed syllable), *judge*, and *hundred* occurs in the Fort Wayne speech sample in a considerable variety of phone types: monophthongs [ʌ], [ɜ], [ɛ], [ɚ], and [ɑ]; ingliding diphthong [ʌ^{ə}]; and upgliding diphthongs [ʌ$^{ɪ̝>}$] and [ʌ^{ʊ}] (Table A14 and Table A15).

In the Anglo-American idiolects sampled, the dominant phone type for / ʌ / is monophthongal [ʌ] and ingliding [ʌ^{ə}]. These phones predominate in the upper middle-class speech sample in the word *judge*, but are distributed across all social levels. The tense central vowel [ɜ] occurs in A12, A14, and A15 and the upgliding [ʌ^{ɨ}] in A19 for the phoneme / ʌ / in *judge*. In the word *hundred*, monophthongal [ʌ] was observed in the speech of all Anglo informants.

In the middle and upper middle-class Negro groups, the monophthongal [ʌ] and [ɜ] phones predominate. Several other phone types occur in *judge* in the speech of Black-Americans in the lower social levels. The constricted [ɚ] is present in the speech of three informants B32, B38, and B40, who are recent arrivals from Alabama, South Carolina, and Missouri. [ɛ] occurs in the speech of B36 and B39 and the upgliding [ʌᵘ] and [ʌᶤ] in the speech of six recent Negro arrivals. A variety of phones for / ʌ / in such words as husband and hundred also occur in the Black-American speech sample, the upgliding [ʌᵘ] occurring frequently along with monophthongal [ʌ]. Ingliding [ʌᵊ] and upgliding [ʌᶤ] also occur. Thus, the off-glide phone type appears to be more prevalent in the Black-American speech than in the Anglo-American speech sample.

By contrast, the Latin-American informants do not have off-glide phones for the phoneme / ʌ / in such words as judge, hundred, and son. The better-educated Latins generally have the monophthongal [ʌ] while those less fluent in the use of English tend to use the phone [ɑˑ], e.g., L43, L47, L48, L49, and L50. This difficulty in achieving the phone [ʌ] is undoubtedly related to the fact that the Mexican-Spanish vowel system does not have the phoneme / ʌ /. Thus, these speakers tend to substitute [ɑ] for [ʌ], using the Spanish allophone of / ɑ /.

Figure B11 shows that [ʌ] for the phoneme / ʌ / prevails in popular speech in the surrounding area with sporadic occurrence of [ɜ] and off-glides [ʌᵊ] and [ʌᵘ]. The standard speech of Fort Wayne also indicates the prevalence of [ʌ] along with the centering off-glide [ʌᵊ]. Thus, a variety of phones in the Negro speech, [ʌᶤ], [ʌᵘ], [ɚ], [ɛ], and the substitution of the phone [ɑ ~ ɑˑ] in Latin speech are potential social markers in this community.

/ aI /

For the free vowel phoneme / aI / as in SAE *five*, *twice*, and *ice*, a wide variety of phone types occur in the Fort Wayne speech sample (Tables A16 and A17). These allophonic variations can be described in terms of the place of formation as well as the duration of the first member of the diphthong and the type and relative prominence of the off-glide. The phones of / aI / occurring in the fifty idiolects are distinguished by beginnings varying from low-front to low-central and raised low-central positions. Also, the length of the first element, ranging from relatively short to long duration, produces distinctly different allophones. A relatively long beginning, followed by a brief, vanishing off-glide, produces the "slow" diphthong; e.g., [a·ᵋ ∿ ɑ·ᵋ [, [a·ᶿ], and [ɑ·ɨ]. A short beginning, followed by a rather prominent off-glide, produces the "fast" diphthong; e.g., [aɨ ∿ ɑɨ ∿ ɐɨ].

In the Anglo-American speech sample, the "fast" diphthong with a low-central beginning predominates in the standard dialect; e.g., in the speech of A1, A2, A3, and A4. A raised low-central beginning occurs fairly frequently, being distributed in this sample primarily among the older informants in the lower middle-class group. Variants of the "slow" diphthong [ɑ·ɨ ∿ a·ɨ] occur rather infrequently in the Anglo-American speech sample. Approximately thirty percent of the informants (A4, A8, A11, A12, A14, A19) have the "slow" form in checked position before a voiced consonant; e.g., in *five*.

The Black-American speech sample exhibits a greater variety of phone types than either of the other ethnic groups. The "fast" diphthong with low-central beginning is present in the checked position before voiced consonants, for example, five, in the speech of both the younger and older better-educated Negro informants. In the checked position before the voiceless consonant in twice, approximately sixty percent of the Black informants have some variety of the low-central diphthong. In contrast to the standard form of the / aI /, the recent Negro arrivals generally have the "slow" diphthong with a brief upglide or off-glide before the voiced consonant [a·ᵋ ∿ ɑ·ᵋ] or [a·ᵊ]; e.g., in the speech of B33, B34, B36, and B39.

The use of the phone [ɑ] for / aI / occurs primarily in the speech of Latin informants in the lower social spectrum, e.g., L47, L49, L50; however, this phone is also present in the speech of L43. Several of the better-educated Latins use the phone [ɑ·ɨ] or [ɑI] and thus have no contrast in their use of the phoneme / aI / with that of the standard form in the community.

Figure B12 and Figure B13 show for the area surrounding Fort Wayne the presence of the "slow" diphthong in the phones [ɑ·ɨ ∿ ɐ·ɨ ∿ ɑ̸·ɨ] and "fast" diphthong in [ɑɨ ∿ ɐɨ ∿ əɨ ∿ aɨ]. The "fast" diphthong tends to predominate before the voiced consonants, for example, in five and clearly predominates before the voiceless consonant, for example, in twice. Several instances of the centralized [ɐɨ ∿ əɨ] occur. But there are no occurrences of the "slow" diphthong [a·ᵋ ∿ ɑ·ᵋ] or, for that matter, of the phone [ɑ]. Thus, the most striking allophonic deviations for the phoneme / aI / from the popular use in the surrounding area and from the standard dialect of the Fort Wayne community occur in the Black-American speech of recent arrivals in the "slow" diphthongs [a·ᵋ ∿ ɑ·ᵋ] and [aᵊ] and in the Latin-American use of [ɑ].

/ aʊ /

The free phoneme / aʊ / as in SAE drowned, without, and down occurs in the Fort Wayne speech sample in a wide variety of phone types (Tables A18 and A19). The allophones of / aʊ / can be described in the terms of the vowel quality of the first element, the relative length of the first element and the character of the off-glide, positional variations of the first element depending upon whether the diphthong precedes a voiced or voiceless consonant or ends the word.

In the Anglo-American speech sample, the dominant allophone for / aʊ / is [ɑʊ], beginning in the low-central position and gliding to the lower high-back position. The off-glide, however, does occur infrequently as [0] and [ɵ]. The phone type [ɑʊ] is distributed across all social classes in the Anglo-American group, e.g., in the speech of A1, A5, A12, and A20. Also, the diphthong [aʊ] with the low-front beginning occurs fairly often in the speech of informants on various social levels, e.g., A4, A6, A8, A15, and A17. Apparently, the **upper** low-central beginning is rather rare, only A16 having [ɐʊ] in without and in drowned. Varieties of the "fast" diphthong clearly prevail in the Anglo-American use of [aʊ] in checked position before the voiced consonant, e.g., in drowned and before the voiceless consonant, e.g., in without. In the word-final position, as in cow, the same pattern prevails.

The Black-American speech sample evidences a greater variety of allophones for / aʊ / than either the Anglo or Latin group, especially in the checked position before the voiced consonant and the **word** -final position. In the checked position before a consonant, as in drowned, the "slow" diphthongs compete strongly with the "fast" diphthongs. Although forms of the "slow" diphthong [ɑ·ʊ ∿ a·ʊ ∿ æ·ʊ] occur in all social classes of the Black ethnic group, they appear more frequently in the speech of recent arrivals, e.g., B26 (Alabama), B27 (Georgia), and B33 (Mississippi). These "slow" diphthongs exhibit distinctly different beginnings: the low front [a·ʊ] for B29 and B34; the higher low-front [æ·ʊ] for B33, B36, and B40; and low central [ɑ·ʊ] for B36. Eight Black informants use the "slow" diphthong before the voiced consonant while only three use it before the voiceless consonant. On the other hand, there is no increase in the number of "slow" diphthongs in the Anglo speech sample when a positional change occurs in which / aʊ / comes before a voiced consonant or at the end of a word rather than before a voiceless consonant.

Several of the Latin-American informants' pronunciation of / aʊ / approaches closely the prestigious form in this community. L41, L42, L45, and L46 begin the diphthong in the low central position with an off-glide to [ʊ] in the lower high-back position. But the quality of the off-glide varies considerably for the Latins having less education and more limited social contacts. For these persons, the common off-glides are [u] and [0].

Figure B14 and Figure B15 show variants for / aʊ / in the words drowned and without in popular speech for the area surrounding Fort Wayne. The "fast" diphthong predominates overwhelmingly both before the voiceless consonant / t / in without and before the voiced consonant / n / in drowned. Although there is a slight increase in number of "slow" diphthongs before the voiced consonant in this sample from the Linguistic Atlas field records, the increase is negligible. Consequently, the importance of positional variants of / aʊ / in the surrounding area, as well as in Fort Wayne, seem insignificant. The primary deviation of phones for / aʊ / from the standard usage of Fort Wayne and the popular usage of the surrounding area would appear to be the "slow" diphthongs [ɑ·ʊ ∿ a·ʊ ∿ æ·ʊ] in the dialects of recent Negro arrivals.

/ ɔI /

In the Fort Wayne speech sample, the allophonic variations for the free vowel phoneme / ɔI / are distinguished by beginnings varying from low-back to mid-back, with the raised low-back beginning the most common. The "fast" diphthong prevails in the standard dialect, but the "slow" diphthong also occurs fairly frequently, particularly in the speech of recent Negro arrivals (Table A20).

In the Anglo-American speech sample, the dominant allophone for / ɔI / is [ɔ̝ᵻ], thirteen of the informants having this phone in the word oil. Five of the Anglo informants have the "slow" [ɔ·ᵻ] and two a low-back beginning [ɒᵻ].

A greater variety of allophones for / ɔI / is shown in the Black-American speech sample. The upper middle-class Negroes use the phones [ɔI ∿ ɔ·I], except B27, a recent arrival, who has the "slow" diphthong with a centering off-glide [ɔ·ᵊ]. The upglide [ɔ·ᵋ] occurs in the speech of B31, B35, and B36 and another upglide variant [ɒɔ] in B32 and B33. Another interesting deviation is B34's use of the constricted [ɚ] in the diphthong [ɔɚ] in oil.

The Latin-American speech sample shows the younger, better-educated informants using the prestigious form [ɔᵻ], with the exception of L41 who has the mid-back beginning [Oᵻ]. The phone [Oᵻ] is also heard in the speech of L47 and L49 in the word *oil*, while the centering off-glide occurs in the speech of L43, L48, and L50.

Figure B16 shows the variants of / ɔɨ / in the word *oil* in the popular speech for the area surrounding Fort Wayne. The "fast" diphthong [ɔɨ] clearly predominates, with the "slow" form [ɔ·ɨ] occurring fairly frequently. Thus, the primary deviations from the standard usage of Fort Wayne and the popular usage of the immediate area are the phones [$\text{ɔ·}^{\text{ɛ}}$], [$\text{ɔ·}^{\text{ə}}$], [ɒɔ], and [ɔɚ] in the idiolects of recent Negro arrivals and the phones [Oɨ] and [$\text{ɔ}^{\text{ə}}$] in the speech of Latin-Americans.

/ ɜ /

The major phone types for the free vowel phoneme / ɜ / as in SAE *girl*, *thirty*, and *nurse* in the Fort Wayne speech sample are the monophthongal [ɚ] and the ingliding diphthong [ɜɚ]. The most striking phonetic deviations from these dominant forms are diphthongs in which the first elements are unconstricted, such as [$\text{ɜ}^{\text{ə}}$] and [$\text{ɜ}^{\text{ɨ}}$] in the speech of recent Negro arrivals (Tables A21 and A22).

In the Anglo-American speech sample, the dominant phone type for / ɜ / is an upgliding diphthong [ɜ̣ɚ]. This diphthong starts from a mid-central position with a partial constriction of the breath caused by a humping of the tongue and ends with the tongue bulging upward to produce a fully constricted sound. This phone is distributed across all social levels. Also occurring at all social levels, but with lower frequency, is the monophthongal [ɚ].

These constricted phones, [ɚ] and [ɜ̣ɚ], also predominate in the speech of the upper middle-class Negroes in *girl* and *thirty* for B21, B22, B24, B25, B26, and B27. Four of these informants have lived in the community at least ten years. On the other hand, unconstricted phones or diphthongs with unconstricted beginnings, such as [ɜ], [$\text{ɜ}^{\text{ə}}$], and [$\text{ɜ}^{\text{ɨ}}$], in *thirty* and *girl*, seem to characterize the speech of recent Negro arrivals. B32, B33, B36, and B39, residents of the community for less than five years, use the "r-less" phone [$\text{ɜ}^{\text{ə}}$] in *girl* and [$\text{ɜ}^{\text{ɨ}}$] in *thirty*.

In the Latin-American speech sample, phones for the phoneme / ɜ / are of the constricted variety; e.g., [ɚ] for L46, L48, and L49 and [ɜ̣ɚ] for L41, L42, and L44 in the word *thirty*. The principal variant from these standard forms is the diphthong [əɚ]; e.g., in the speech of L43 and L45.

Figure B17 and Figure B18 show the phones for / ɜ / in *thirty* and *girl* in the popular speech of the immediate area around Fort Wayne. Fully or partially constricted phones for / ɜ / prevail, with the monophthongal [ɚ] occurring more frequently than [ɜ̣ɚ]. Thus, in the Fort Wayne community and the surrounding area, the unconstricted phones [$\text{ɜ}^{\text{ə}}$ ∿ $\text{ɜ}^{\text{ɨ}}$ ∿ ɜ] in the Black-American speech contrast with the prestigious forms and are thus potential social markers.

Consonants

/ p /

The voiceless bilabial stop / p / as in SAE *push*, *April*, *speech*, and *whip* has the phones [pʻ] and [p] in the speech of all social and ethnic groups sampled. In initial position in stressed syllables, it is usually aspirated in the speech of all informants. In final position, this phone tends to be aspirated more frequently in the speech of the Latins, for example, in the word whip (Table A2) for L46, L49, and L50 than in the speech of the Anglo and Black informants.

/ b /

The voiced bilabial stop / b / as in SAE boy, husband, and tube occurs as two phonic types in this speech sample: [b] and [β]. The Anglo-American and Black-American informants use [b]. Both [b] and [β] are used by the Latin-Americans. Lower-class Latins use the bilabial fricative phone [β] where / v / occurs in English, e.g., in seven for L47, L49, and L50. [β] occurs in the place of [b] in husband for L47 and L50 (Table A15), and an unvoicing of [b] occurs in the final position of tube as [p], for L47, L48, and L50 (Table A9).

/ t /

For the voiceless apico-alveolar stop / t / as in SAE ten, without, thirty, and tube, the following phones occur in this speech sample: [tʻ], [t], [t̬], [ɾ], and [d]. In the initial position in stressed syllables, the aspirated phone [tʻ] usually occurs in the speech of all informants. The aspirated variety also is used frequently in the medial and final positions by the Latins; e.g., in thirty for L41, L43, L44, and L45 (Table A22) and in without for L43, L44, L47, and L49 (Table A19). The voiced phone [t̬] occurs intervocalically in thirty and water in the speech of many informants in all ethnic groups. The fully voiced phone [d] is heard in lower-class informants in all ethnic groups, e.g., in thirty for A17, B34, and L46 (Table A22).

Between vowels in such words as water and vegetable, the flapped phone [ɾ] occurs occasionally in the speech of the Anglo and Black informants, e.g., in water for A5 and B35, and frequently in the speech of Latin informants; e.g., L41, L42, L44, and L46.

/ d /

The voiced alveolar stop / d / as in SAE dog, husband, and drowned occurs as three phone types in this speech sample: [d], [t], and [ʔ]. In initial and medial position, all informants use the phone [d], except L47, who uses [ʔ] in window. However, the phone [d] in the final position in a consonant cluster, as in the word husband, tends to be weakly articulated or lost in Anglo-American speech and is nearly always lost in the speech of the Black and Latin informants (Table A15). In final position in such words as drowned, forehead, and hundred, the Black and Latin informants, particularly in the lower class groups, often use the phone [t], e.g., B37, B40, L43, L48, and L50 (Table A18).

/ k /

For the voiceless dorso-velar stop / k / as in SAE can't, careless, six, and sack, two phones occur: [k] and [k‘]. Generally, informants of all groups use the aspirated phone [k‘] in the initial position as in careless (Table A23) and the unaspirated phone [k] in final position, although the Latins tend to aspirate this phone in final position, e.g., L44, L45, and L47 in sack. No socially significant variants of this phone occur in this speech sample.

/ g /

The voiced dorso-velar stop / g / as in SAE *girl*, *eggs*, *dog*, and *greasy* occurs in this speech sample as the phones [g] and [k]. For nearly all informants, this phoneme presents no problem. Exceptions are the substitution of [k] for [g] in *dog* by L43, L49, and L50 and the loss of articulation of [g] in final position by B32 and B39 (Table A13). L50 also uses [k] for [g] in *eggs*. Although these deviations from the standard phone [g] are infrequent in this sample, they probably function as social markers in this community.

/ f /

For the voiceless labio-dental fricative / f / as in SAE *five*, *coffee*, and *roof*, the phone / f / occurs in the speech of all informants (Table A16); thus, the use of this phoneme presents no problem for the ethnic groups sampled.

/ v /

For the voiced labio-dental fricative / v / as in SAE *five*, *seven*, and *vegetables*, three phones occur in this speech sample: [v], [f], and [β].

Nearly all informants have the phone [v] in the positions represented in *vegetables*, *seven*, and *five*. But there are significant exceptions. Lower class Latin informants tend to use the phone [f] instead of [v] in *five*, e.g., L47, L49, and L50 (Table A16), and both Latin and Black informants of this social group often articulate weakly the [v] in word-final position, e.g., B36 and L46. Furthermore, Latin informants occasionally substitute the bilabial fricative [β] for

[v] between vowels; e.g., L46, L47, and L49 in *seven*.

/ θ /

The voiceless apico-dental fricative / θ / as in SAE *thirty*, *nothing*, and *mouth* has the phones [θ], [t], [t̪], and [f] in this speech sample. In the word-initial position, e.g., in *thirty*, the phone [θ] occurs in the speech of nearly all informants; however, B36 has the phone [t] and L47 and L50 the dental phone [t̪] in *thirty* and *three*. In the medial and word-final positions, the phone [θ] also previals. Deviation are the use of [t̬] by B34 and [t̪] by L47 and L50 in *nothing* and the substitution of [f] for [θ] by B27, B30, B33, B36, and B40 in the word *mouth*. Also significant is the loss of [θ] in the word-final position; e.g., in *mouth*, by B32 and B34.

/ č /

For the voiceless apico-alveolar **stop** / č / as in SAE *chimney*, *furniture*, and *touch*, two phone types occur in this speech sample: [tʃ] and [ʃ]. In the initial position, for example, in *chimney*, *chair*, and *chest* (Table A24, A5, and A4), the phone [tʃ] prevails in the Anglo and Black speech, with the exception of B36, who uses [ʃ] in *chimney*. On the other hand, the occurrence of the phone [ʃ] for [tʃ] is rather common in the speech of the working and lower-class Latins, for example, in *chair* for L47 (Table A5), in *chest* for L46, L47, and L49 (Table A4), and in *chimney* for L46, L47, L48, and L49 (Table A24). L47 and L50 use the phone [ʃ] for [tʃ] in *furniture*; and in word-final position, for example, in *touch*, L47 and L49 also use the phone [ʃ].

/ ǰ /

The voiced apico-alveolar stop / ǰ / as in SAE judge, bulge, genuine occurs regularly as the phone [dʒ] in the speech of nearly all the survey informants. However, the phones [ʃ] and [tʃ] are present in the speech of a few of the Latin informants. L43 uses the phone [tʃ] in word-final position in judge and bulge, and L47 and L49 use this phone in joint. L47 and L48 use [ʃ] in the word bulge. Thus, the distinction among the sounds [tʃ], [dʒ], and [ʃ] present difficulties for the less-educated Latins.

/ s /

The voiceless apico-alveolar sibilant / s / as in SAE six, first, horse, and sack occurs regularly as the phone [s] in the speech of all the survey informants. The phoneme / z / competes vigorously with / s / in greasy in middle-class Fort Wayne speech.

/ z /

For the voiced apico-alveolar sibilant / z / as in SAE zoo, husband, eggs, and ashes, two phone types occur in this speech sample: [z] and [s]. In the speech of the Anglo and Black informants, the phone [z] prevails as illustrated in the medial and final positions in husband and ashes (Tables A15 and A7). On the other hand, the unvoiced phone [s] does occur in both Anglo and Black idiolects with somewhat greater frequency in the lower social groups; e.g., in husband for A9 and A10 and B25, B27, B30, B33, B36. There is also a tendency for some Black informants to unvoice this phone in final position, e.g., [z̥] in eggs as pronounced by B27, B31, B34, B39, and in ashes as spoken by B25, B31, B33, B36, and B37. But the most striking contrast in the use of the phones for / z / occurs between the Anglo and Black informants on the one hand and the Latins on the other. Nine of the ten Latin informants use [s] in medial position in husband and all of them use [s] or [s̬] in the word-final position in ashes (Tables A15 and A7). Also, in the word-final position in eggs, following the voiced velar stop [g], five of the Latins use [s] or [s̬] and three [z̥]. Actually none of the Latin informants use the phone [z] for the phoneme / z / consistently.

/ š /

In this speech sample, the voiceless fronto-palatal sibilant / š / as in SAE shut, wash, and dishes occurs in the phones [ʃ], [dʒ], and [tʃ]. Without exception, the Anglo and Black informants use the phone [ʃ] in such words as shut, dishes, brush, wash, push, and ashes (Tables A10 and A7). However, there is a sporadic use of the phones [tʃ] and [dʒ] in the speech of the Latins. L48, for example, uses [tʃ] in brush and wash, and L45 [tʃ] in horseshoes. And L41 has the phone [dʒ] in shut. The allophonic variations for / š /, / č /, and / ǰ / in the speech of these Latin informants indicate that the distinctions between these English phonemes are not easily mastered by persons whose native language is Mexican Spanish.

/ ž /

The voiced fronto-palatal sibilant / ž / as in SAE pleasure and rouge occurs rather infrequently in American English. It occurs in the speech of all informants as the phone [ʒ] in the word pleasure but occurs as [dʒ] in garage and rouge in the speech of many informants in each of the ethnic groups.

/ m /

The voiced bilabial nasal / m / as in SAE mother, morning, chimney, and room occurs in the speech of all informants as the phone [m]; e.g., in morning, chimney, and tomorrow (Tables A25, A24, and A8).

/ n /

The voiced apico-alveolar nasal / n / as in SAE nine, window, and ten occurs in the speech of all informants as the phone [n]; e.g., in ten and chimney (Tables 4 and 24). In several instances Anglo and Black informants substitute the phone [l] for [n] in chimney; e.g., A9, A14, A18, B23, B24, B27, and B31. Latin informant L48 uses [n] and [l] interchangeably and L50 uses [β] for [n] in chimney. [n̩] forms the peak of syllables occasionally. For example, syllabic [n̩] occurs after [t] in written in the speech of A1, A2, and A3.

/ ŋ /

The voiced dorso-velar nasal / ŋ / as in SAE something, morning, mourning, and drink occurs in this speech sample as two phones: [ŋ] and [n] (Table A25). All informants use the phone [ŋ]; however,

[n] in the *ing* suffix is fairly common, e.g., in *going* for Anglo informants A12, A13, A15, A18, and A20; for Black informants B31, B34, B36, B37, and B40; and for Latin informants L46, L48, and L50. The substitution of / n / for / ŋ / in *ing* rarely occurs in the formal speech of upper middle-class informants.

/ l /

The lateral phoneme / l / as in SAE *log*, *April*, *girls*, and *glass* occurs in this speech sample as two phones: [l] and [ɫ]. All informants use the "clear" "l" (voiced apico-alveolar lateral) in initial position and after a voiced consonant, e.g., *log* and *glass*. Also, all informants use the "dark l" (voiced apico-alveolar lateral with dorso-velar coarticulation) after vowels; e.g., in *April* and *girl* (Tables A6 and A21). The "dark l" also forms the peak of syllables occasionally; syllabic [l̩], for example, occurs after [d] in the speech of A1 and A5 in *candle*.

/ r /

The phoneme / r / as in SAE *rinse*, *arrow*, *drowned*, and *three* occurs in this speech sample as the following phones: [r], [ɹ], [r̃], and [ɾ]. The common alveolar frictionless r-sound, [r], is heard in the speech of all informants in the initial position in *range* and in the intervocalic position in *arrow*. [ɹ], a fricative slit spirant articulated by the tip of the tongue, is heard after alveolar stops. Nearly all informants have this phone after [t] and [d]; e.g., in *drowned* (Table A18). [ɾ] is the flapped *r*, which is made by touching the tongue tip briefly to the alveolar ridge and withdrawing it quickly. This phone occurs as a variant of / r / between vowels, as in *water* in the speech of all ethnic groups, for example, Anglo informants A1, A3, A6; Black informants B21, B23, B25; and Latin informants L41 and L48. [r̃], the trilled *r*, occurs only in the speech of the Latin informants; e.g., in *three* for all Latins except L41 and L48.

/ h /

The voiceless glottal fricative / h / as in SAE *husband*, *whip*, and *haunted* occurs in the speech of all informants as the phone [h]. The loss or weakening of [h] in the consonant cluster / hw / of *whip* occurs rather infrequently; e.g., in A14, A19, B22, B24, B35, L45, and L49.

/ W /

The labiovelar phoneme / W / as in SAE *wash*, *without*, *twice*, and *genuine* occurs as two phones: [W] and [W̥]. All informants have both the voiced and voiceless phones. In *wash* and *without*, the voiced phone occurs, but after a voiceless consonant it is a voiceless phone [W̥], as in *twice*.

/ J̇ /

The voiced fronto-palatal phoneme / J̇ /, as in SAE *yolk*, *onion*, and *yesterday* occurs in this speech sample as two phones: [J] and [dʒ], a phonemic substitution.

The Anglo and Black informants, as well as the well-educated Latins, use the phone [J]; however, some of the lower-class Latins occasionally use a phone approximating [dʒ]; e.g., in *yolk* for L46, in *yellow* for L46 and L49, and in *yesterday* for L49 and L50.

/ ə̯ /

In the speech of informants who do not have the postvocalic / r /, the unsyllabic consonant phoneme / ə̯ / occurs in such words as *ear* and *four* / iə̯, fɔə̯ / as the phone [ə̯]. Recent Black arrivals especially have this phone; e.g., in *four* B26, B32, B37, B38, and B39. But nonsyllabic / ə̯ / is lost completely in *four* in the speech of B34 and B36. On the other hand, long-time Black residents, even in the working-class group, have constricted phones [ɚ] or [ə̣] in the postvocalic / r / position; B29, B30, and B31 have strongly constricted [ɚ] in this position. Since postvocalic / r / is characteristic of the prestigious dialect of this community, the contrasting [ə̯] or the complete loss of a phone in this position is a potential social marker.

Incidence of Phonemes

Differences in pronunciation result not only from variations in the system of phonemes and in the pronunciation of individual phonemes but also from variations in the occurrence of individual phonemes in specific words. To raise such questions as "Does *aunt* begin with an / æ / or an / a /?" "Does *soot* have an / u /, / ʊ /, or / ə / sound?" is to consider the matter of phonemic incidence. Derivative studies from Linguistic Atlas data show that different phonemes do occur in particular words in rather clear regional and social distribution. Statements in the following discussion about social and regional dissemination of phonemes in particular words in Eastern United States will be based on

The Pronunciation of English in the Atlantic States.[15]

The incidence of phonemes in the Fort Wayne speech sample will be examined to determine their social distribution and to provide additional evidence for evaluating dialect affiliations of the speech of the community. In the accompanying tables (see Table 10), the column headings *MC* and *LC* represent middle-class and lower-class groups. The upper middle-class and lower middle-class groups have been combined in the *MC* column, as have the working-class and lower-class in the *LC* column. A preliminary test using the four social groups, as compared to combining them into two groups, indicated for these data that equally satisfactory results for the purpose are achieved in this simpler presentation. But when interesting deviations occur which tend to be lost in this more generalized handling of the data, these variations will be reported. Phonemes clearly predominating in particular lexical items in the middle class sample will be considered the standard usage of the community and will be used when making comparisons to cultured usage in other areas investigated by the Linguistic Atlas projects. Likewise, phonemes prevailing in lexical items in the lower-class sample will be considered nonstandard usage in the community. The column "Per cent of group using

Table 10. / I / and Variants

Lexical item	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
rinse	/ I /	5	6	23	25	.09	.05
	/ ε /	17	17	77	71		
	/ e /*	0	1	0	4		

variant" means the per cent of informants in a given social class using a particular phonemic variant in the lexical item. X^2 is the chi-square statistic which has been determined for the distribution (frequency of occurrence) of phonemic variants for a particular word in the two social groups. "P" is the level of significance or probability level. In this context it is used to test the hypothesis that pronunciation and social class are independent of each other. For example, in Table 10, "P" is $>.05$, which means that, given the hypothesis that pronunciation and social class are independent of each other, the probability is greater than .05 that the distribution by class of the variants for / I / in the word rinse could occur by chance alone. Likewise, when "P" is $<.05$, as in Table 11 for the vowel phonemic variants in egg, the probability is less than .05 that the distribution by class of the variants for the phoneme under consideration could occur by chance. An asterisk placed

Table 11. / ɛ / and Variants

Lexical item	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
deaf	/ ɛ /	21	21	95	84	.92	>.05
	/ i /	1	3	5	12		
	/ e /*	0	1	0	4		
egg	/ ɛ /	18	12	75	46	4.33	<.05
	/ e /	6	14	25	54		
yellow	/ ɛ /	23	19	100	76	3.39	>.05
	/ ʌ /	0	5	0	21		
yesterday	/ ɛ /	20	24	87	96	1.52	>.05
	/ I /	3	0	13	0		
	/ æ /*	0	1	0	4		

immediately to the right of a phonemic variant, for example, / e /• in Table 10, signifies that the particular variant has such a low frequency of occurrence that it has been dropped from the chi square computation because its expected cell frequencies are too small for rigorous application of the chi square statistic.

In *rinse* the vowel / ɛ / of *bet* predominates in both middle and lower-class usage. Although four of the five occurrences of / ɪ / are among the most highly educated informants, three of these five are middle aged or older. / ɛ / prevails in the younger, well-educated informants, but it is widely used also in the lower-class group.

In *deaf* the vowel / ɛ / is nearly universal in the middle-class group and clearly prevails in lower-class speech. But the / i / of *beat*, typical of folk speech of the Eastern States, does occur with slightly higher frequency in lower-class speech. / e / of *bait* is rare in this community.

The pronunciation of *egg* varies across social groups, / ɛ / predominating in middle-class and / e / in lower-class usage. Seventy-five per cent of the middle-class informants use / ɛ / and fifty-four per cent of the lower-class group use / e /. The pronunciation / ɛ / is characteristic of North Midland speech on all social levels, but / e / competes with / ɛ / elsewhere and is gaining ground among the middle class. / e / in this speech sample does occur in all ethnic and social groups.

Among middle-class speakers in this community, / ɛ / prevails in the stressed syllable of *yellow*. It is also the most common form in lower-class speech, although / θ /, common in the South Atlantic States, is used by twenty-one per cent of the lower-class speech sample. The common folk form, / æ /, prevalent in the South Midland, occurs in only eight per cent of the lower-class group.

The vowel / ɛ / in the stressed syllable of yesterday is the predominant form on all social levels. / I / occurs infrequently; e.g., only in the speech of A14, A15, and B24.

Table 12. / æ / and Variants

Lexical items	Phonemic variants	Incidence frequency		Per cent of group using variant		X^2	p
		MC	LC	MC	LC		
aunt	/ æ /	15	15	71	58	3.10	>.05
	/ a ∿ ɑ /	5	5	24	19		
	/ ɛ /	1	6	5	23		
glass	/ æ /	19	17	100	81	4.02	<.05
	/ ɛ /	0	4	0	19		
can't	/ æ /	19	15	90	58	4.75	<.05
	/ e /*	0	2	0	7		
	/ ɛ /	2	9	10	35		
rather	/ æ /	12	5	57	20	8.80	<.02
	/ ɛ /	6	18	29	72		
	/ ʌ /	3	2	14	8		
stamp	/ æ /	13	5	62	24	6.22	<.02
	/ ɑ /	8	16	38	76		

In this speech sample, three vowel phonemes occur in aunt: / æ /, / a ∿ ɑ /, and / ɛ / as shown in the table above. In middle-class Anglo-American speech, / æ / is the prevailing form (100 percent frequency), but in middle-class Black-American speech / a ∿ ɑ / are the prestigious forms; e.g., in the speech of B22, B23, B24, B25, and B26. In lower-class Black speech / æ / competes vigorously with / a ∿ ɑ /.

/ ɛ / occurs in twenty-three per cent of the lower-class speech sample, largely in Latin-American speech.

The phoneme / æ / is the universal form in *glass* in the middle-class group and the predominant usage in the lower-class group. / ɛ / occurs occasionally in the speech of recent Latin arrivals.

In the word *can't*, three phonemes [æ], [e], and [ɛ] occur in this speech sample in a rather graduated social distribution. The prestigious form is / æ / with ninety per cent occurrence in the middle-class group and fifty-eight per cent frequency in the lower class group. / ɛ / competes strongly with / æ / in the speech of less-educated informants, and / e /, a common South Midland folk pronunciation in *can't*, occurs rather infrequently in the lower-class group (seven per cent frequency).

The stressed vowel / æ / in *rather* is the typical pronunciation among the middle-class, while / ɛ / is the predominating phoneme among lower-class speakers in this speech sample. The phoneme / ə / is also heard, though infrequently, in lower middle-class speech, e.g., A12 and A14 and in lower-class speech, e.g., B36.

The phoneme / æ / and / ɑ / occur in the verb *stamp* (one's foot) on all social levels, although / æ / tends to predominate in the prestigious dialect (Table 12). In the middle-class group, the phoneme / æ/ prevails (62 per cent frequency) as contrasted with / ɑ / (76 per cent frequency) in the lower-class group. Yet / ɑ / does occur fairly often in the middle-class speech (38 per cent frequency). Both / æ / and / ɑ / are cultivated pronunciations in the Eastern States.

Table 13. / ɑ / and Variants.

Lexical items	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
palm	/ ɑ /	20	23	87	92	.33	>.05
	/ ɔ /	3	2	13	8		

Two vowels occur in this speech sample: the / ɑ / of father and the / ɔ / of caught. / ɑ /, the common Midland and Southern occurrence in this word, is the usual vowel in both middle-class and lower-class speech. / ɔ /, a typical phoneme in this word in Pennsylvania, occurs infrequently in all class groups in Fort Wayne.

As noted in Table 14, brush has three vowel phonemes, / ə /, / ɛ /, and / ɑ /, occurring in rather clear-cut social distribution. / ə / is the dominant form in cultivated speech, while / ɛ / occurs infrequently in this social class and is restricted to Black informants. In the lower-class group, / ɛ / competes sharply with the prestigious / ə /. The occurrence of / ɑ / in brush is restricted to Latin informants.

In bulge, the vowel phonemes / ə /, / ʊ /, and / u / are in use among all groups. But characteristic of the North and North Midland pronunciation, / ə /, decidedly predominates in all social classes. / ʊ / and / u / occur infrequently. / ʊ /, the vowel prevailing in bulge of South and South Midland territory occurs in the speech of four informants.

The vowel phoneme / ə / in judge is the prestigious form in this speech sample. Eighty per cent of the middle-class informants use this

Table 14. / ə / and Variants

Lexical items	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
brush	/ ə /	19	15	87	53	6.62	<.05
	/ ɛ /	3	10	13	36		
	/ ɑ /	0	3	0	11		
bulge	/ ə /	18	11	82	84	.002	>.05
	/ ʊ /	3	1	14	8		
	/ u /*	1	1	4	8		
judge	/ ə /	20	15	80	58	7.81	.05
	/ ɜ /	5	4	20	15		
	/ ɛ /	0	3	0	12		
	/ ɑ /	0	4	0	15		
nothing	/ ə /	24	20	100	77	5.34	<.05
	/ ɑ /	0	5	0	19		
	/ ɛ /*	0	1	0	4		
touch	/ ə /	23	16	100	67	8.26	<.01
	/ ɛ /	0	7	0	29		
	/ ʊ /*	0	1	0	4		

phoneme. / ə / is also the predominant usage in the lower-class group. In both class groups, / ɜ / occurs, though rather infrequently. The phonemes / ɛ / and / ɑ / represent the usage of more than a fourth of the lower-class informants. A further usage cleavage occurs here along ethnic lines, the / ɑ / characterizing the speech of recent Latin arrivals and / ɛ / the speech of Blacks who have lived in the community a relatively short time.

In the speech sample, the phoneme / θ / in nothing (Table 14) is found in the speech of all middle-class informants. This phoneme clearly prevails also in the lower-class group; however, nonstandard variants occur as / ɑ / and / ɛ / in lower-class speech. / ɑ / occurs rarely in Anglo-American idiolects in this sample but fairly frequently in Latin-American idiolects.

Touch (Table 14) has the phonemes / ə /, / ɛ /, and / ʊ /. Again, / ə / decidedly predominates as the prestigious usage in this community. In the lower-class sample, / ɛ / occurs in touch in speech of the seven informants and / ʊ / in one. / ɛ /, which is used commonly in folk speech of the South and South Midland, occurs most frequently in the pronunciation of recent Negro arrivals, e.g., B36, B38, B39, and B40.

Table 15. / ʊ / and Variants

Lexical items	Phonemic variants	Incidence frequency		Per cent of group using variant		X^2	P
		MC	LC	MC	LC		
push	/ ʊ /	23	20	96	77	3.71	>.05
	/ u /	1	6	4	23		

Two vowels occur in push in this speech sample: / ʊ / of put and / u / of boot. / ʊ / is clearly the favored vowel in this word in both the middle and lower-class groups. / u / occurs primarily in the speech of the lower-class group of this community. It also occurs in the speech of the lower middle-class but not in the usage of the highly educated.

Table 16. / i / and Variants

Lexical items	Phonemic variants	Incidence frequency		Per cent of group using variant		X^2	P
		MC	LC	MC	LC		
creek	/ i /	10	2	56	33	.89	>.05
	/ I /	8	4	44	66		

As shown in the table just above, two phonemes occur in creek as it is pronounced in the Fort Wayne community: / i / of meek and / I / of pick. Here, indeed, is an interesting example of divided usage. In the middle-class group, eight informants use / I / and ten / i /. Informant A2, an elderly, highly educated native of the community states that he used / i / as a boy but now uses / I /, which he considers the preferred form. A6, a middle-aged, well-educated native now uses / i / as the "prestigious" pronunciation but recalls saying / I / in creek in her youth. A7, also a well-educated, elderly native, now uses / i / and believes the trend in the community is toward the use of this phoneme. Further demonstrating the actual state of divided usage, A11, a prosperous farmer and native, uses / I / in free conversation and / i / in careful speech. Thus, in this dialect transition area, cultured speakers waver in their choice of North Midland (also Inland North) / I / or Inland

North (or South Midland) / i / in creek.

One might speculate as to whether greater tolerance and respect for dialect differences exist in dialect transition areas than in dialect focal areas where certain characteristic forms are clearly recognized as prestigious ones.

Table 17. / e / and Variants

Lexical items	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
afraid	/ e /	21	6	95	100	.50	>.05
	/ ɛ /	1	0	5	0		

/ e / is the nearly universal phoneme in afraid on all social levels in this speech sample. / ɛ /, a variant found in the South, particularly the Upcountry of Georgia and South Carolina, occurs in the speech of only one informant, B23, a native of Tennessee.

Table 18. / u / and Variants.

Lexical items	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
soot	/ u /	3	2	14	10	8.10	<.01
	/ ʊ /	17	7	77	38		
	/ ə /	2	10	9	52		

Soot has three vowel phonemes in this speech sample: / u / of loot, / ʊ / of pull, and / ə / of but. In middle-class speech, / ʊ / predominates (77 per cent frequency). In the upper middle-class, all informants use / ʊ /. On the other hand, the incidence of phonemes in *soot* in lower-class speech is more varied, about fifty per cent of the informants using / ə /, forty per cent the prestigious form / ʊ /, and ten per cent the phoneme / u /. Although *soot* with the vowel of *loot* occurs in cultivated speech in the Eastern States, this pronunciation does not appear to have prestigious status in this community. There seems to be no significant difference between Anglo and Black speakers' use of the variants / u /, / ʊ /, and / ə / in *soot*. A12 and A13, whose parents are of South Midland origin, use / ə /; B23, B31, B40, who are natives of South Midland territory also use / ə /. However, three of the five instances of / u / appear in the Latin informants' speech, probably reflecting the presence of the / u / phoneme in Mexican Spanish and the absence of the / ʊ / phoneme.

/ o / and Variants

Variants of / o / in such words as *home*, *goal*, *won't* and *loam* in this speech sample are rather infrequent. In *home*, the vowel / o / prevails; the only observed variant is checked / ɵ / for one informant, A17. The word, *goal*, as used in basketball and hockey, has the vowel / o / in the speech of all informants except A10 and A15, middle-aged, lower-class informants, who use / u / characteristic of folk speech in the Inland North dialect area. Likewise, in the word *loam* / o / prevails with the North Midland variant / ʊ / occurring only in the speech of A9 and A20 of the twenty-two informants for this particular word. / o / is also decidedly dominant in *won't* with only A17 using the New England and Inland North / ʌ / and A8 and A14 the infrequent North and North Midland / ɔ /.

In *yolk*, / O / clearly predominates, with infrequent use of / ɔ / and / ɛ /, although the incidence of the following consonant / l / creates a complex pattern of pronunciation for this word, e.g., [ʃoʊk ∿ ʃoʊlk ∿ ʃɔʊlk].

Table 19. / ɔ / and Variants

Lexical item	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
daughter	/ ɔ /	17	19	74	76	.37	>.05
	/ ɑ /	2	3	9	12		
	/ ɒ /	4	3	17	12		
haunted	/ ɔ /	18	13	82	52	5.39	>.05
	/ ɑ /	4	8	18	32		
	/ ɵ /	0	4	0	16		
wash	/ ɔ /	15	16	63	61	4.63	>.05
	/ ɑ /	4	9	17	35		
	/ ɒ /	5	1	20	4		

The vowel / ɔ / of *caught* predominates in *daughter* on all social levels in this speech sample. Variants / ɑ / and / ɒ / occur infrequently, the / ɒ / appearing occasionally in the speech of recent Black arrivals B26, B27, and B32 and / ɑ / in the speech of Latin-Americans L42, L45, and L48.

The stressed vowel in *haunted* occurs as three phonemes: / ɔ /, / ɑ /, and / ɵ /. In the middle-class speech sample, / ɔ / prevails (eighty-two per cent frequency) with some competition from / ɑ /. Informants in the upper middle-class group use / ɔ / exclusively. An examination of the divided usage in the lower-class sample, especially between the use of / ɔ / and / ɑ /, shows some evidence of cleavage along ethnic lines. / ɔ / predominates in lower-class Anglo speech in haunted while / ɑ /, as well as / ə /, occurs frequently in lower-class Black speech. In the lower-class Latin speech, / ɑ / occurs rather often, e.g., in the speech of L45, L48, and L49.

In the word wash, the phonemes / ɔ /, / ɑ /, and / ɒ / occur with little indication of variation of these phonemes across social levels. / ɔ / clearly predominates in both middle and lower-class speech samples; however, / ɔ / occurs more frequently in the upper middle-class Anglo speech and / ɑ / appears to be the prestigious form in upper middle-class Negro speech.

Table 20. Unstressed / ə / and Variants.

Lexical item	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
careless	/ ə /	14	7	58	27	5.05	<.05
	/ I /	10	19	42	73		
Cincinnati	/ ə /	6	5	38	72	2.44	>.05
	/ I /	7	1	44	14		
	/ i /	3	1	18	14		
China	/ ə /	18	20	95	80	X^2 not appropriate for these frequencies	
	/ i /	0	1	0	4		
	/ ɑ /	0	3	0	12		
	/ ɜ /	1	1	5	4		

As noted in the previous table, in the unstressed syllable of careless, the phoneme / ə / appears more frequently than / I / in the middle-class speech sample (fifty-seven per cent frequency). This

Midland feature, far from clearly dominating cultivated speech of this community, obviously has keen competition from the checked / I /, a New England settlement (and Southern) feature. It is difficult to detect a trend in the use of these variants. / ə / and / I / are almost equally distributed among young, highly educated Black and Anglo informants, as they are among the middle-aged and elderly, well-educated informants of both ethnic groups. If a trend can be detected in this state of divided usage, it may be suggested in the fact that middle-class usage of urban informants shows a higher frequency of / I / (fifty per cent) than does middle-class rural usage of / I / (thirty per cent). In the unstressed syllable in other words, such as *bucket* and *mountain*, / ə / is more common than / I /. All in all, the unstressed vowel / ə / predominates in the middle-class speech in this community.

In middle-class speech, usage is also divided in the pronunciation of the unstressed final syllable of *Cincinnati*. Approximately forty per cent of the informants use / ə /, forty per cent / I /, and twenty per cent / i /.

The predominance of / ə / in syllable-final position in *China* in this speech sample is what Linguistic Atlas data predicts. Only one informant of the fifty interviewed uses the folk speech form / I /.

In the speech sample in Table 21, *borrow* has the phonemes / o /, / ə /, and / i / in the final syllable. / ə /, the predominating form, occurs on all social levels, as does the less current / o /. / i / obviously is a rare occurrence and is restricted to lower-class usage.

Table 21. Unstressed / o / and Variants.

Lexical item	Phonemic variants	Incidence frequency		Per cent of group using variant		X^2	P
		MC	LC	MC	LC		
borrow	/ o /	9	11	45	42	.004	>.05
	/ ə /	11	14	55	54		
	/ i /*	0	1	0	4		
tomato	/ o /	8	2	42	33	1.10	>.05
	/ ə /	11	4	58	67		

The final syllable of tomato has the phonemes / o / and / ə / in this speech sample. In middle-class speech, / ə / again predominates, as it does in lower-class usage.

Table 22. / ð / and Variants

Lexical item	Phonemic variants	Incidence frequency		Per cent of group using variant		X^2	P
		MC	LC	MC	LC		
this	/ ð /	21	17	100	74	4.42	<.05
	/ d /	0	6	0	26		

The use of the variant / d / for / ð / is a striking social indicator in this community. The incidence of the stop / d / for the fricative / ð / is considerably higher in free conversation than in the more formal interview style used by informants in responding to specific items on the questionnaire. It is the incidence of / d / for / ð / in the more formal style of the informants that is recorded in Table 22. The evidence in both free conversation and formal speech shows the use of / d / for / ð / to be a social indicator, not an ethnic indicator.

Table 23. / θ / and Variants.

Lexical item	Phonemic variants	Incidence frequency		Per cent of group using variant		X^2	P
		MC	LC	MC	LC		
with	/ θ /	20	17	83	65	2.98	>.05
	/ ð /	3	4	13	15		
	/ f /	1	5	4	19		
without	/ θ /	15	17	65	65	.79	>.05
	/ t /*	0	1	0	4		
	/ ð /	8	5	35	19		
	/ f /*	0	3	0	12		
mouth	/ θ /	21	19	95	83	.88	>.05
	/ f /	1	4	5	17		

In *with* and *without*, the voiceless fricative / θ / is the dominant form on all social levels in this speech sample. Though / ð / occurs much less frequently, it is also distributed across all social levels. On the other hand, the incidence of / f / for / θ / or / ð / is much higher in the lower-class sample.

Likewise, in the word *mouth*, the incidence of / f / for / θ / is much higher in the lower-class sample, and thus is a social indicator in this community.

The clear regional dissemination of / z / and / s / in *greasy* (/ z / characteristic of the South and Midland and / s / of the New England and Inland North regions) makes the incidence of these phonemes particularly interesting in a transition area between these regions.

Table 24. / s / and / z / in greasy.

Lexical item	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
greasy	/ S /	15	18	65	67	.01	>.05
	/ Z /	8	9	35	33		

Current speech in this community, whose population history predicts competition of these phonemes, clearly shows divided usage. In both middle-class and lower-class speech, / s / occurs more frequently, but / z / is far from being a sporadic occurrence. Eight speakers of twenty-three in the middle-class group use / z /. In the upper middle-class sample, / z / appears even more frequently, six informants using / z / to nine who use / s /. The age distribution of these phonemes in the upper middle-class indicates, if anything, that / z / is gaining ground: five young informants use / z / and four / s /; whereas, in the middle-aged and elderly group, one informant uses / z / and five / s /. In this prestigious group, there is no significant cleavage along ethnic lines. Four Black informants use / s /, three / z /, and five Anglo informants use / s / and three / z /. The divided usage of / z / and / s / in greasy in this community provides favorable conditions for testing the hypothesis that tolerance and respect for dialect differences develops in dialect transition areas. The subjective responses of various socio-economic and ethnic groups to divided usage features is reported in Chapter 5.

The consonant cluster / bj / in February (Table 25) clearly predominates in middle-class speech and is also common in lower-class

Table 25. / br / and Variants in *February*.

Lexical item	Phonemic variants	Incidence frequency		Per cent of group using variant		X^2	P
		MC	LC	MC	LC		
February	/ br /	3	1	19	5	9.67	<.05
	/ bj /	13	11	81	52		
	/ b /	0	4	0	19		
	/ V /	0	5	0	24		

speech of this sample. All occurrences of / br / are in the upper middle-class, but even here / bj / is the dominant usage. The reduction of the consonant cluster to / b / or / v / is fairly common in lower-class speech.

Table 26. Incidence of / r / and / č / in *wash*.

Lexical item	Phonemic variants	Incidence frequency		Per cent of group using variant		X^2	P
		MC	LC	MC	LC		
wash	/ Š /	19	21	83	81	.05	>.05
	/ rŠ /	3	4	13	15		
	/ Č /*	0	1	0	4		

Wash without the intrusive / r / is the dominant form in both middle-class and lower-class speech (Table 26). Nevertheless, it is noteworthy that the intrusive / r / (a Midland feature) is used consciously and with abandon by socially prominent members of the community. The rare occurrence of / č / is in the speech of a Latin informant, L48.

Table 27. Incidence of / l / in *palm*.

Lexical item	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
palm	/ m /	20	23	87	92	.33	$>.05$
	/ lm /	3	2	13	8		

The pronunciation of *palm* without the phoneme / l / is clearly the predominant usage on all social levels in this speech sample. Yet incidence of / l / is found in both middle-class and lower-class speech.

Table 28. Incidence of / ə̯ / and / r / in *door*

Lexical items	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
door	/ r /	13	6	93	35	8.02	$<.01$
	/ ə̯ /	1	8	7	46		
	loss of phoneme*	0	3	0	19		

In this speech sample, the incidence of / r / and / ə̯ / in *door* has rather clear-cut social dissemination. The postvocalic / r / is the socially prestigious form, while non-syllabic / ə̯ / and loss of the syllable-final phoneme occurs largely in the lower-class speech sample. Whether subjective responses to these features of "r-less" dialects make them social markers in this community is a matter investigated in Chapter 5.

As the data in Table 29 shows, the use of the phonemes / l / and / bl / for / n / in *chimney* is a deviation from standard usage and

Table 29. / n / and Variants in chimney.

Lexical item	Phonemic variants	Incidence frequency MC	Incidence frequency LC	Per cent of group using variant MC	Per cent of group using variant LC	X^2	P
chimney	/ n /	17	19	78	70	.11	>.05
	/ l /	5	7	32	26		
	/ bl /*	0	1	0	4		

undoubtedly functions as a social indicator. But these phonemic alternations, / l / and / bl /, are not, as popularly conceived, ethnic identifiers. The incidence of / l / in chimney is found in all ethnic groups of this speech sample: A9, A14, A18, B23, B27, and L48.

Suprasegmental Phoneme of Stress

In the transcription of informants' responses to the short worksheet items, stress is not indicated in the raw data except when the stress pattern deviates from the normal pronunciation. Since the majority of utterances are pronounced by informants with the same stress pattern, to mark these words in the same way would be superfluous.

One of the most striking deviations of stress observed in this study is the pronunciation of compound nouns by the lower-class Latin informants. In the pronunciation of railroad, cobweb, and horseshoes, several of the Latin informants tend to place equal stress on the two elements of the compound or to shift the primary stress to the second element. This suprasegmental pattern contrasts with the pattern heard in Anglo-American speech, which places primary stress on the first syllable of compound nouns.

Another deviation in stress pattern observed in the speech of lower-class Black informants is the front-shifting of stress in such words as *police* and *hotel*. These deviations in suprasegmental stress patterns are sources of interference in mastering the standard dialect of the community and are potential social markers.

Summary

The phonemic system of the standard dialect of the Fort Wayne community has **ten** free vowel phonemes and **six** checked vowel phonemes. Phones in the range of low-front [a] and low-back [ɒ] are heard infrequently and can be treated as allophonic variations of / ɑ /. Likewise, phones in the range of high-central [ɨ] can be classified as allophones of mid-central / ə / or low high-front / I /. Cultivated speakers distinguished / ɑ / and / ɔ / in such words as *cot* and *caught*, but few distinguished / o / and / ɔ / in such words as *hoarse* and *horse*, the / ɔ / phoneme prevailing. In addition to the usual consonants of Standard American English, the mid-central semivowel / ə̯ / must be added to account for the sound which regularly replaces postvocalic / r / in the speech of cultured recent arrivals from "r-less" dialect areas.

A wide range of variations in the pronunciation of individual phonemes occurs in the Fort Wayne speech sample. Many of these variations are potential social markers. Working-class and lower-class Latin-Americans have difficulty attaining proper distinctions in the English vowel system, particularly in pronouncing the phonemes / I /, / æ /, / ə /, / ʊ /, / ɔ /, / aI /, / aʊ /, and / ɔI /. These informants also have difficulty in making the off-glides characteristic of English vowels and in producing certain consonant sounds which are not found in Mexican Spanish or which conflict in the two languages. Off-glides [oʊ] for the free vowel / o / and [$ɔ^{ə}$] for / ɔ /, for example, are typical of the prestigious dialect of the community but are difficult for the Latin-American to produce. Consonant sound problems for the lower-class Latin-Americans include discriminating between [b] and [v], [d] and [t] in word-final position, and among the phones [tʃ], [ʃ], and [dʒ]. Striking phonic variations of phonemes in the speech of recent Black-American arrivals include variations in the use of off-glides, use of "slow" diphthongs, reduction in constriction of postvocalic / r /, changes in the quality of vowels before the non-syllabic / ə̯ /, and weakened articulation or loss of consonants in word-final position or in consonant clusters. The occurrence of [e·] and [i] before / r / in chair is characteristic of the change of vowel quality before the weakly-constricted / r / or the substituted / ə̯ /. Among off-glide variants of probable social significance heard in lower-class Black-American speech are [$ʌ^{ɨ}$] and [$ʌ^{U}$] in judge and [ɨu] in such words as new and due. "Slow" diphthongs for the phonemes / aI /, / aʊ /, and / ɔI / in the speech of recent Black arrivals contrast with the "fast" diphthongs characteristic of the prestigious dialect of the community. For the phoneme / aI /, for instance, variants heard in the speech of recent Negro arrivals are [$a\cdot^{ɛ} \sim ɑ\cdot^{ɛ}$] and [$a\cdot^{ə}$] in such words as five. The weakly-constricted postvocalic / r / or substitution of unsyllabic / ə̯ / for / r / is heard in the speech of cultured recent arrivals in such words as five and door and probably is a social marker in this community. Likewise, the weak articulation and complete loss of consonants in such words as good, umbrella, *chest*, and *hundred* are probably social markers.

Differences in pronunciation resulting from variations in the occurrence of specific phonemes in individual words occur frequently in the lower-class groups sampled. Among variants most likely to be social markers are the use of / d / for / ð / in such words as *this* and *those* and / f / for / θ / in *mouth*. But in middle-class speech, mixed usage prevails in certain lexical items such as *creek* and *greasy*, raising the question of whether tolerance and respect for dialect differences develop in a dialect transition area.

One of the most striking variations observed in the suprasegmental phoneme of stress is the front-shifting of stress by lower-class Black informants in such words as *police*. Another significant variation of stress observed is the pronunciation by lower-class Latins of compound nouns with equal stress on both elements of the compound or primary stress on the second element of the compound.

End Notes

1. E. Bagby Atwood, *A Survey of Verb Forms in the Eastern United States* (Ann Arbor, 1953) p. v.

2. Raven I. McDavid, Jr., "Some Social Differences in Pronunciation," *Aspects of American English* (New York, 1963), pp. 241-251.

3. Hans Kurath and Raven I. McDavid, Jr., *The Pronunciation of English in the Atlantic States* (Ann Arbor, 1961), p. 2.

4. *Ibid.*

5. Raven I. Mc David, Jr., "System and Variety in American English," *New Directions in Elementary English* (Champaign, 1967), pp. 129-130.

6. Kurath and McDavid, *op. cit.*, p. 319.

7. Hans Kurath, *A Phonology and Prosody of Modern English* (Ann Arbor, 1964), pp. 81-82.

8. McDavid, "Some Social Differences in Pronunciation," p. 243.

9. Janet Beck (Moseley) Sawyer, "A Dialect Study of San Antonio, Texas: A Bilingual Community" (unpublished Doctoral Thesis, The University of Texas, Austin, 1957), p. 72.

10. Harold V. King, "Outline of Mexican Spanish Phonology," *Studies in Linguistics*, Vol. 10, No. 3 (Austin, 1952), p. 51.

11. Juanita Virginia Williamson, "A Phonological and Morphological Study of the Speech of the Negro of Memphis, Tennessee," (unpublished Doctoral thesis, the University of Michigan, Ann Arbor, 1961), p. 1.

12. Hans Kurath, et al., *Handbook of the Linguistic Geography of New England* (Providence, 1939), pp. 122-146.

13. King, *op. cit.*

14. *Ibid.*

15. Kurath and McDavid, *Pronunciation of English in the Atlantic States*, *op. cit.*, p. 2.

CHAPTER IV

INFLECTIONAL VARIANTS AS POTENTIAL SOCIAL MARKERS

As previously mentioned, features of grammatical usage are generally considered to be the most clear-cut social markers in American English.[1] Among these features, a considerable range of usage still exists, especially in the inflectional forms of verbs and pronouns. Even though inflectional leveling has been going on in English since earliest times, Francis estimates that two out of every nine lexical words in normal present-day speech are inflected.[2] The considerable variety of usage existing in verb and pronoun forms is to be expected because most of the remaining inflections in English are found in these two parts of speech.[3] Of these two, the verb has the more elaborate set of inflections: (1) the third-singular inflection, (2) the past-tense or preterit inflection, (3) the past-participle inflection, and (4) the present-participle inflection. The inflectional forms of the pronoun, commonly called the objective (accusative) and the first and second possessive,[4] are also the source of frequent deviation from cultivated speech. Other inflectional forms remaining in English are the plural and genitive for nouns and the comparative and superlative degrees for adjectives and adverbs. Thus, an examination in this dialect transition area of actual grammatical usage, particularly of inflectional forms of verbs and pronouns, should (1) identify variants probably functioning as social markers; (2) perhaps show trends of competing inflectional forms; for example, the preterit forms of dove and dived; and (3) give insight into the extent to which variations within standard English are recognized and accepted in a dialect transition area.

This chapter deals with matters of usage related to a limited area of grammar. The term grammar as used by linguists designates a branch of linguistic science dealing with syntax and morphemics.[5] Morphemics is the study of the combination of phonemes into meaningful units such as affixes (prefixes and suffixes) and words; whereas syntax deals with a higher level of language organization: the combination of words into phrases, clauses, and sentences. The suffixes of English can be divided into two groups: inflectional and derivational. Derivational suffixes, among other characteristics, may change the form-class or part of speech of a word to which they are added; for example, the suffix ful added to beauty changes a noun to an adjective. Derivational affixes also occur as prefixes; e.g., dis added to arm to produce disarm. On the other hand, inflectional affixes occur in modern English only as suffixes and do not change the part of speech of a word to which they are added; for example, the suffix es added to the verb go produces the third-person, singular form of the verb. This chapter, thus, is limited to points of usage related to the inflection of verbs, pronouns, and nouns.

E. B. Atwood and Virginia McDavid, drawing from Linguistic Atlas material, have made systematic studies of variant verb inflections in American English. Atwood's study is based on Linguistic Atlas data for the Eastern States, areas of obvious importance for understanding the spread of dialect features into the interior of the continent. As noted in the previous chapter, Atwood concluded that verb usage is more clearly divided along social lines than are pronunciation and vocabulary. More surprising was his conclusion that nonstandard verb usages vary regionally.[6] Thus, in a dialect transition zone, one could anticipate a variety of competing nonstandard verb forms. Virginia McDavid's study, *Verb Forms of the North Central States and Upper Midwest*, gives the present social and regional distribution of a large number of verb forms in use in the Midwest.[7] She reports many informants using two or more preterit or past-participle forms of verbs, for example, informants who do vary their stylistic use of the preterit of *eat* with *ate*, *et*, and *eat*. She also detects a tendency for verb forms characteristic of the speech of Type I informants along the Atlantic seaboard to be found with decreasing frequency as one goes west. Preterit verb forms such as *brang*, *brung*, *clim*, *drawed*, *drunk*, *drinked*, *druv*, *driv*, *fout*, *heerd*, *het*, *swim*, *swimmed*, *taked*, and *tuck*, are included in this group. She further observes the old tendency to level the preterit and past-participle to be characteristic of Type I and Type II informants, as in such verb forms as *drank*, *wore*, and *wrote*.

Since the facts of variant verb usage have been well established by major investigations, the purpose here is to examine briefly a few variants of prime interest in a dialect transition zone where the competetion of certain forms may be increasing as a result of recent migration into the community. In the following discussion, nonstandard verb forms will be represented in traditional "eye dialect" spellings where possible; otherwise, the phonemic transcription of the variant form will be given. When the functional variety of verb usage is not identified in the following discussion, the style of the informants can be assumed to be formal responses to interview questions. When stylistic variations are observed in informal conversation, these variant verb forms will be identified as such.

Preterit Inflections

begin

The preterit *began* / bigæn / predominates among all social and ethnic groups. Variants are *begun* / bigən / heard in lower-class Anglo-American and Black-American speech and *begin* / bigIn / observed frequently in lower-class Black-American and Latin-American speech. Informants B28, B30, and B33 shift to *begin* / bigIn / in informal conversation and A2 uses *begun* / bigən / in informal speech. *Commenced* and *started* were preterits preferred by some informants.

come

The preterit form *came* / kem / predominates on all social levels of the Anglo-American speech sample. However, in free conversation, the present-tense form *come* / kəm / increases among the working-class informants. Among both the Black-American and Latin-American informants of the working-class and lower-class groups, the form *come* / kəm / occurs about as frequently as / kem /. None of the upper middle-class Black-Americans interviewed use / kəm / in formal speech.

climb

The preterit form *climbed* / klaImd / is universal in the speech of all upper middle-class informants and is the predominant form among all social and ethnic groups. *Clum* / kləm /, the Midland variant, occurs in the formal speech of A14, A15, A16, A20, and B33. *Clim* / klIm / characteristic of both North and South dialect areas, is used by B36. Variants heard in Latin-American speech are the present-tense form climb / klaIm / and climbt / klImbt /.

do

Did / dId / is the only form used by upper middle-class Black-American and Anglo-American informants in this speech sample. Done / dən / as the preterit form occurs in the formal speech of less than one-fourth of the Anglo-American and Black-American working-class and lower-class informants. However, in informal conversation A11, A14, A20, and B28 shift to done / dən /. L48 and L49 use done regularly in formal and informal speech.

dive

The preterit of dive occurs in this speech sample as dived / daIvd / and dove / dov / and / dIvt /. The first two forms occur with nearly equal frequency among upper middle-class Anglo-American and Black-American informants. If anything, the North dialect form dove predominates over the Midland and South dived. Recent Black-American and Latin-American arrivals from South Midland and Southern dialect areas use the preterit dived / daIvd / almost exclusively. The form / dIvt / occurs occasionally in the speech of Latin informants. Dived / daIvd / appears to occur more commonly among older native informants and dove to be more frequent among younger native informants.

Since actual usage gives both forms prestigious status in this community, subjective response tests for these forms should give insight into the degree of tolerance inhabitants of a dialect transition area develop for features having divided usage.

drink

The preterit drank / dræŋk / is almost universal among all Anglo-American informants in this speech sample. It predominates also among upper middle-class Black-Americans; but among working-class and lower-class Black-Americans, the variant drunk / drəŋk / occurs in the speech of approximately one-half of these informants and the present-tense form drink / drIŋk / in about one-fifth of these informants. The most common variant in the Latin informants' speech is the form drink.

drive

In this speech sample, the preterit form drove / drov / is almost universal in Anglo-American usage. This form is also the only one used by upper middle-class Black informants. Approximately one-fourth of the working-class and lower-class Black-Americans use drived / draIvd / as the preterit. The most common variant in the Latin-American speech sample is the form drive / draIv /.

drown

The preterit form drowned / draʊnd / decidedly predominates among the upper middle-class Anglo-American and Black-American informants. Drownded / draʊnded / occurs in the speech of about one-third of the working-class Anglo and Black informants. The present-tense form drown / draʊn / occurs frequently in Black-American and Latin-American speech. Sporadic occurrences of this variant are recorded in the speech of upper middle-class Black-Americans and in about one-third of the working-class and lower-class. Nearly half of the Latin informants use the present-tense form drown.

give

In this speech sample, gave / gev / is the universal form among all upper middle-class informants. It also predominates strongly among all other social groups. The present tense form give / gIv / occurs rarely in lower-class groups.

run

The preterit ran / ræn / is universal in the usage of the upper middle-class Anglo-American informants and clearly predominates in the same class of Black informants. The uninflected variant run / rən / occurs in the speech of a few elderly Anglo-American and approximately one-third of the lower-class Black-American and Latin-American groups. The occurrence of run increases in informal speech of the lower-class groups.

see

The preterit saw / sɔ / strongly predominates on all social levels among the three ethnic groups. Seen / sin / occurs infrequently and see / si / rarely as variants for saw among lower-class groups.

sit

The preterit sat / sæt / dominates upper middle-class Anglo-American and Black-American speech in this sample. However, the uninflected sit / sIt / occurs fairly frequently on all social levels of the Anglo=American groups. Set / sɛt / occurs frequently among all Black-American groups and sit / sit / less often. Younger, better-educated Latin-Americans use sat; but the common usage among lower-class Latins is set, with sit the second most common preterit form used by this group.

sweat

In the Anglo-American group, the uninflected form sweat / swɛt / is used almost universally on all social levels. On the other hand, the alternate form sweated / swɛtəd / occurs more frequently than sweat on all social levels among both Black-American and Latin-American groups.

swim

The preterit form swam / swæm / is practically universal among Anglo-American informants of all social classes. Occurring rarely in this ethnic group is the variant swum / swəm /. Swam is clearly the predominant form among upper middle-class Black-Americans. Among working-class and lower-class Black-Americans, the variant swimmed / swImd / occurs fairly often and swum infrequently. Better-educated Latin-Americans use the standard form swam and lower-class Latins prefer the present-tense form swim.

take

The preterit form took / tʊk / is almost universal on all social levels among the three ethnic groups. Taked / tekt / and tooked / tʊkt / occur sporadically among the lower-class Black-Americans.

teach

The preterit taught / tɔt / prevails on all social levels among the three ethnic groups. Learnt / lɛrnt / occurs rarely among elderly, uneducated Anglo-Americans, and teached / tičt / infrequently among lower-class Latin-American and Black-American informants.

Past-Participle Inflections

bite

In this speech sample, the past-participle form bitten / bItən ~ bItn / prevails in upper middle-class Anglo-American and Black-American usage. Bit / bIt / occurs in the speech of about half of the working-class and lower-class Anglo and Black-Americans. The standard form bitten predominates on all levels among the Latin-Americans, although bit / bIt / occurs fairly often.

drink

The past participle drunk / drəŋk / clearly predominates on the upper middle-class levels of the three ethnic groups sampled. Among the working-class and lower-class groups, drank / dræŋk / competes strongly with the standard form. Other variants occurring sporadically among the Black-American and Latin-American groups are drinked / drəŋkt /, drinken / drəŋkən /, dranken / dræŋkən /, and drink / drəŋk /. In all the working-class and lower-class ethnic groups, there is a strong tendency toward leveling the preterit and past participle to the form drank.

drive

Driven / drIvən / predominates as the past-participle form on all levels among the three ethnic groups. The variant drove / drov / is fairly common among lower-class Anglo-Americans, but rather infrequent among Black-American and Latin-American informants of this social class. Drived / draIvd / and drouf / drouf / occur rarely in the speech of lower-class Latin informants.

eat

The past-participle form eaten / itən / predominates on all levels among the three ethnic groups. Ate / et / occurs fairly often among the lower-class groups. / ɛt / occurs rarely and the present-tense eat / it / infrequently in lower-class speech of the ethnic groups investigated.

tear

The past-participle form torn / torn / prevails among upper middle-class informants of the three ethnic groups. About half of the lower-class informants of these three ethnic groups use the variant tore / tor /. The present-tense form tear / tɛr / does occur, however infrequently, among recent Latin-American arrivals.

write

The past-participle form written / rItən ∿ rItn / predominates strongly on all levels among the three ethnic groups. Infrequent deviations from the standard form occur as wrote / rot / among the elderly, uneducated Anglo-Americans and recent Black-American and Latin-American arrivals. Write / raIt /, though rare, does occur among lower-class Latin-Americans.

Third Person Singular Inflection

do

The inflected form does / dəz / occurs as the third-person singular of do / du / among all upper middle-class informants in this speech sample. This form also prevails among other Anglo-American social groups. Do is used by approximately forty per cent of the recent Black-American arrivals, and this variant form is also fairly common among lower-class Latin-Americans.

doesn't

The negative form doesn't / dəznt /, unlike the positive form does / dəz /, shares frequent usage with don't / dont / for the third-person singular even among the upper middle-class informants. Approximately one-fifth of the Anglo-American and Black-American informants in this class use the variant don't / dont / in formal speech. The frequency of don't increases sharply in the working and lower-class informants of the three ethnic groups. More than half of the informants in these groups use the nonstandard form in the formal interview situation and a greater number use don't in free conversation. For example, B39, a high school student, used doesn't in formal speech but later in free conversation said, "He don't live with us no more."

Other Verbs

The third-person singular inflections / -s, -z, -ɨz / as in sleeps / slips /, swims / swIms /, and teaches / tichɨz / occur regularly among all upper middle-class informants of this speech sample. On the other hand, the loss of the third-person singular inflection is common especially among working and lower-class Latin and Black-American informants: B37, "My father sell cars"; B36, "Well, he mix the paint"; B34, "It run over one-hundred and twenty"; L50, "He live on a farm."

The Present-Participle Inflection

The present-participle inflection occurs regularly as / -Iŋ / in formal upper middle-class speech, although occasional instances of / -In / are heard, for example, in the speech of A3, A6, B23, and B26. In informal conversation, the frequency of / -In / increases in this social class as heard in A4, A8, B22, B25, and B27. / -In / strongly predominates in working and lower-class usage among the three ethnic groups. Conscious stylistic variation between / -Iŋ / and / -In / for formal and informal situations was observed in only a few informants: A19, B30, and B31.

The omission of the present-participle inflection occurs occasionally among lower-class informants: L47, "I was help my husband"; B36, "They was steal the car."

Other Inflectional Deviations of Verbs

Unorthodox uses of the verb be / bi / are common in this speech sample among working and lower-class informants. The present tense of to be is used with all persons, singular and plural, in such utterances as the following: B38, "They be teaching you in school"; B36, "Everybody be laughing at you"; B34, "You be trying to show off"; L50, "I think I be glad"; B37, "We be scared." Also common in the speech of the lower-class Black-American and Latin-American informants is the omission of a form of the verb to be in such utterances as these: L50, "We borned right here"; L49, "I think they no good"; B37, "I hope he home in January"; B36, "I thinking about it pretty hard."

In addition to the third-person singular inflection, failure to inflect the verb properly for other person-number relationships occurs frequently in this lower-class speech sample: A17, "They was in shows"; A12, "There is different names for it"; L46, "It all depends on what kind of bread you wants to make"; A9, "My boys was large enough..."; A15, "There's no Bartlett pears."

This nonstandard feature occurs frequently among all lower-class ethnic groups and occasionally among lower middle-class groups.

Plural and Genitive Inflections of Nouns

The loss of the plural inflection of nouns / -s, -z, and ɨz / as in hats / hæts /, boys / bɔIz /, and dishes / dIʃɨz / occurs in this speech sample primarily among lower-class informants: B36, "The wheel(s) come right off."; B38, "I have four sister"; L50, "I want five pound of sugar"; "They bought Christmas present"; L46, "Can you lend me twenty dollar"; L47, "That's one of my problem"; A17, "He walked two mile"; A15, "It is six mile square." This nonstandard feature is rather common among all lower-class ethnic groups in this sample.

The loss of the genitive inflection of nouns / -s, -z, -ɨz /, as in the accountant's / akaʊntənts / report, the teacher's / tičɜz / desk, and the bass's / bæsɨz / spawning ground, occurs in this speech sample among lower-class informants: B38, "I drive my brother car"; B39, "It is the next door neighbor car"; L47, "That is Mr. Smith car"; A17, "Our son farm is next to this." Although this nonstandard feature occurs in lower-class Anglo-American speech in this community, it seems to occur more frequently in recent lower-class Black-American and Latin-American arrivals.

Inflection of Pronouns

Among upper middle-class informants, the most striking instance of divided pronoun usage occurs in the context, "It was (I, me)." The objective form me / mi / occurs in the speech of four of the eight upper middle-class Anglo-Americans and five of seven upper middle-class Black-Americans. In the complete upper middle-class sample of fifteen respondents, there are nine occurrences of me in the subjective complement position and six occurrences of the subjective form I. In the working and lower-class groups of thirty-one respondents, there are twenty-eight occurrences of me and three of I in the subjective complement position.

Likewise, the use of the subjective form who and the objective form whom in the context "(Who, Whom) did you invite to the party?" is a matter of divided usage. Eleven of fifteen upper middle-class informants use the subjective who in the foregoing context. Twenty-six of thirty informants of the other social levels use the subjective form. Although divided usage does exist in the prestigious dialect, the subjective form who clearly predominates in the context illustrated.

Another interesting variation is the occurrence of hypercorrections in such contexts as "...between you and I" and "...gave John and I our presents." Approximately ten per cent of the informants use the subjective form of the pronoun in contexts similar to the foregoing examples.

Our, your, his, hers, and theirs are standard forms of the possessive pronoun in this speech sample. Variant forms are virtually non-existent.

Only B40 uses the nonstandard forms hisn, yourn, ourn.

The interrogative who-all, which Linguistic Atlas data shows as "fairly widespread in the South,"[8] occurs rather infrequently among upper middle-class informants. Well-educated Anglo-Americans A8 and A10, Black-Americans B21 and B26, and Latin informant L41 use the interrogative "who-all." In the speech of recent arrivals from Southern dialect areas, this expression prevails; e.g., Black-American informants B32, B33, B34, B36, B39, and B40, as well as Latin informants L43, L44, and L45. As yet, however, this Southern regional standard form has made no appreciable inroads on the standard form prevailing in this community.

Summary

Inflectional variants observed in this speech sample are essentially social, rather than ethnic indicators. Even when cleavage in inflectional usage seems to exist along ethnic lines, these differences appear to have their origin in regional dialect variations rather than in language features of an intrinsic ethnic nature.

The bulk of the evidence shows relatively little variation of inflectional forms within the upper middle-class, even though Black-American and Anglo-American informants are well represented in this class. Preterit inflections of drink, sit, drown, and swam, and past-participle forms of bite and tear are essentially the same for the ethnic groups within the upper middle-class. On the other hand, considerable variation of inflectional forms occurs among the social groups; thus these variant forms function as social indicators and potential social markers. Among the many preterit forms deviating from the prestigious usage are begun and begin for began; clum and clim for climbed; done for did; drunk for drink for drank; drived and drive for drove; drownded and drown for drowned; sit and set for sat; and swum and swimmed for swam. Among the past-participle forms deviating from prestigious usage are bit for bitten; drank for drunk; ate for eaten; tore for torn, and wrote for written. Likewise, unorthodox use of the verb be and failure to inflect the verb for person-number relationships are characterized by social rather than ethnic distribution. Such utterances as "They be teaching you in school" and "My boys was large enough" were observed in the lower classes of the three ethnic groups but not in the upper middle-class speech sample.

Variations that appear to be ethnic indicators can usually be traced to a regional dialect source. For example, the preterit sweated, the predominant form among the Latin and Black-American informants, is the standard form in the South Midland and South dialect areas from which many of these persons migrated. The nonstandard use of do as the third-person singular, characteristic of the lower-class Black-American and Latin informants, is current in the speech of uneducated classes in the South and South Midland dialect areas. Likewise, the interrogative who-all, typical of recent Black-American arrivals, is a standard form in dialect areas of the South.

Actual usage in this community indicates that the competing preterit forms for dive should be viewed as regional variants rather than social variants. The Inland North variant dove and the South Midland dived occur alongside each other on all social levels in this speech sample. The trend, if anything, is toward the form dove, inasmuch as young, well-educated informants prefer the Inland North form. On the other hand, sanction of textbooks in use in many English classrooms of the area for the form dived and the frequent use of this form by well-educated young Black-Americans make any prediction of trends for this form hazardous. But since both forms compete vigorously in the prestigious dialect, they provide the basis for further testing the extent of tolerance for variant forms in a dialect transition area.

End Notes

1. Raven I. McDavid, Jr., "Sense and Nonsense about American Dialects," Publications of the Modern Language Association of America (May, 1966), p. 15.

2. W. Nelson Francis, The Structure of American English (New York, 1958), p. 232.

3. H. L. Mencken and Raven I. McDavid, Jr., The American Language (New York, 1963), p. 536.

4. Francis, op. cit., pp. 244-245.

5. Francis, op. cit., p. 223.

6. E. B. Atwood, A Survey of Verb Forms in the Eastern United States (Ann Arbor, 1953), p. v.

7. Virginia Glenn McDavid, "Verb Forms of the North Central States and Upper Midwest," (doctoral dissertation, University of Minnesota, Minneapolis, 1956), p. 73.

8. H. L. Mencken and Raven I. McDavid, Jr., op. cit., p. 548.

CHAPTER V

IDENTIFICATION OF PHONOLOGICAL AND INFLECTIONAL VARIANTS AS SOCIAL MARKERS

In major urban centers studies have been made of the subjective response of listeners to pronunciation. Labov investigated the use of five phonological indices of Standard English in New York City: / r / in postvocalic and preconsonantal position, the vowel / æ ∿ a / in such words as *bad*, the stressed vowel / ɔ ∿ ɑ / as in *coffee*, the consonant / θ ∿ t / as in *thing*, and the consonant / ð ∿ d / as in *then*. His research in this particular area led him to conclude that the subjective evaluation of phonological variants constitutes an underlying structure which is recognized throughout a speech community.[1] In a study directed by McDavid and Austin in Chicago, reactions of Chicago natives to various pronunciations of single words were analyzed to determine which pronunciations function as social markers.[2] This research shows that pronunciation is a significant linguistic feature in eliciting negative and positive attitudes in listeners. Further, this investigation finds significant differences in the reactions of Black-American and Anglo-American groups to pronunciations. For instance, Black-American groups appear to be more tolerant toward variations from standard pronunciations than are Anglo-Americans. Both investigations emphasize the need for further study in other communities of correlations between pronunciation and social judgments. McDavid and Austin suggest testing tentative conclusions reached for the Chicago metropolitan area for applicability in other Inland Northern communities and propose similar investigations in Eastern and Southern communities.[3] Labov points out that many of the same nonstandard forms may occur in various communities but with varying impact upon the life chances of the individual.[4] For instance, he notes that the use of stops for / θ / and / ð / in the Southwest does not seem to elicit the negative responses which characterize reactions to these nonstandard forms in Northern and Eastern urban communities.

In the preceding chapters, phonological and inflectional features showing social variation in an urban center in a dialect transition area (Fort Wayne, Indiana) were identified. As McDavid and Labov point out, features deviating from the standard usage of the community may or may not seriously affect the life chances of the individual. Those linguistic variables which have little effect upon the listener's judgment of the social status of the speaker are called indicators by Labov; those variables which have definite effects upon the listener's evaluation of the speaker's status are designated markers.[5] Linguistic features functioning on the one hand as social markers and on the other as social indicators need to be distinguished from each other in various urban communities so that educational programs can give priority to those features stigmatizing individual speakers. Thus, this chapter is concerned with distinguishing between those phonological and grammatical features which function as social markers in a rapidly growing urban community and those which are merely social indicators.

The Instrument Used to Elicit Subjective Responses

Since the technique used in the Chicago dialect study for eliciting subjective responses to pronunciations proved effective, this investigation uses a similar method. The instrument designed to measure subjective evaluations of potentially critical dialect features is composed of two parts: (1) a tape recording of phonological and inflectional variants observed in the Fort Wayne community and (2) a set of attitude scales on which listeners record their reactions to these speech variants.

The words used in testing subjective responses to pronunciations provide a representative sampling from the following six phonological categories or populations:

1. Slight phonetic variations. This category as used here includes minor sound variations represented by one phonetic modification from the central value of the sound, such as the fronting [e˂], retracting [e˃], raising [e˄], or lowering [ə˅] of a vowel sound; the lengthening of the sound [ʊ·]; nasalization of a vowel [æ̃]; the voicing or unvoicing of sounds [t̬], [d̥]. Many instances of minor phonetic variation are recorded in Chapter III, such as the following: [ɪ˄i ∿ i˅i], [i ∿ i·], [æ ∿ æ˄], [t ∿ t̬], [d ∿ d̥], [z ∿ z̥], [ɑɨ ∿ ɑ·ɨ].

2. Major phonetic variation. This category as used in this study includes subphonemic variations of more than one phonetic modification from the central value of the sound, the combination of lengthening and raising a vowel sound [æ˄˙], the shortening and lowering of a sound [ĭ˅], the lengthening of one element of a diphthong and reduction in audibility of the second [a·ᶤ].

Numerous instances of major phonetic variation are noted in Chapter III, such as these: [ɛ ∿ ɛ̂˙], [u˙ ∿ ǔ˙], [ɑɨ ∿ ɑ˙ɨ], [ɔɨ ∿ ɔ˙ə], [ɑʊ ∿ aʊ].

3. *Incidental phonemic variation*. Included in this class are those pronunciation differences which are the result of variations in the occurrence of individual phonemes in specific words. Instances observed in this study are *aunt* / ænt ∿ ɑnt /, *chimney* / čImni ∿ čImli ∿ čImbli /, *palm* / pɑm ∿ pɑlm /, *touch* / təč ∿ tɛč /, *greasy* / grisi ∿ grizi /.

4. *Systematic phonemic variation*. In this category are variations which occur regularly in many words, such as the following: / d / for / ð / in *this*, *those*, *there*; / s / for / z / in *hers*, *boys*, *theirs*; / t / for / θ / in *nothing*, *something*, *think*; / f / for / θ / in *mouth*, *tooth*, *truth*.

5. *Suprasegmental variation*. This type of phonological variation results from a change in normal stress pattern of a word. Examples are *police* / ˌpo'lis ∿ 'poˌlis /, *railroad* / 'relˌrod ∿ ˌrel'rod /, *hotel* / ˌho'tɛl ∿ 'hoˌtɛl /.

6. *Suprasegmental variation in combination with phonemic variation*. Pronunciation differences resulting from a combination of shift of stress and alternation of phonemes such as occur in *umbrella* / əm'brɛlə ∿ 'ɑmbəˌɛlə / are included in this category.

The dialect test tape for pronunciation consists of fifty-two items pronounced in random order by six speakers representing the upper middle-class and lower-class in Anglo-American, Black-American, and Latin-American ethnic groups. These speakers were informants interviewed during the field work for collecting the basic dialect data and were known to represent in their idiolects the pronunciations needed for sampling the range of phonological variants for which subjective responses were needed. The pronunciation items recorded on the tape and the phonological categories which these items sampled are listed in Table 30.

The investigation of inflectional variants in this community indicated that commonly held assumptions about the social status of some grammatical forms were not supported by actual usage. For example, the usage "It is me," contrary to popular belief, is the predominant form in the prestigious dialect. Because attitudes toward such stereotypes of usage (highly regarded forms often not found in actual linguistic behavior) have implications for teaching English usage, the testing of subjective responses in this community to grammatical features was considered necessary. Also, the competition of certain verb forms in this dialect transition area presented an excellent opportunity to test the hypothesis that tolerance develops for variant forms having sanction in the prestigious dialect. Further, once the data were collected, interesting comparisons could be made of the relative importance of grammatical inflection and pronunciation in marking social status.

The items recorded on the dialect test tape for eliciting subjective responses to grammatical inflections provide a representative sampling of the major types of inflection remaining in English:

1. Noun genitive inflection: the *musician's* tuba ∿ the the *musician* tuba.

2. Noun plural inflection: *two* *planes* collided ∿ *two* *plane* collided.

3. Pronoun inflection: It is (*I* ∿ *me*); (*Who* ∿ *whom*) did you call?

Table 30. Categories of Phonological Variation of Pronunciation Items Used on the Test Tape.

Introduction	Categories of Phonological Variation					
	Slight phonetic variation	Major phonetic variation	Incidental phonemic variation	Systematic phonemic variation	Suprasegmental variation	Suprasegmental variation plus phonemic variation
#1. The wife of your uncle is your ...			[ænt] [ɑnt] [ɛ̌nt]			
#2. French-fried potatoes are often ...			[grisi] [grizi]			
#3. Black smoke poured from the factory ...			[tʃImli] [tʃImni]	[tʃimi] [tʃImni]		
#4. From the corner of the ceiling hung a large ...					['kɑbwɛb] ['kɑb'wɛb]	
#5. After the accident, the driver called the ...					['polis] [po'lis]	
#6. Two plus two equals ...				[fo] [for]		
#7. For a new mechanic, his work was ...	[gʊ^d] [gʊd]					

Table 30. Cont'd.

Introduction	Categories of Phonological Variation					
	Slight phonetic variation	Major phonetic variation	Incidental phonetic variation	Systematic phonemic variation	Suprasegmental variation	Suprasegmental variation plus phonemic variation
#8. On the corner stood a tall, thin ...				[mæn] [mɛn]		
#9. Don't ask her to bake a cake; she ...				[kænt] [ke^{ɪ}nt]		
#10. When the sun came out, she hung out the ...				[wɔəʃ] [wɔʃ] [wɑʃ]		
#11. What we need on a rainy day is an ...						[ɑmbə'ɛlə] [əm'brɛlə]
#12. My car needs a change of ...	[oˇɨl] [ɔɨl]			[ɔɨl] [ɔ·l]		
#13. Stray dogs often kill ...				[ʃip] [tʃip]		
#15. She took my book, not ...				[hɚs] [hɚz]		

Table 30. Cont'd.

Introduction	Categories of Phonological Variation					
	Slight phonetic variation	Major phonetic variation	Incidental phonetic variation	Systematic phonemic variation	Suprasegmental variation	Suprasegmental variation plus phonemic variation
#16. You prefer that house; I prefer...				[dIs] [ðIs]		
#17. I have two sons and one...	[dɔt̬ɚ] [dɔd̥ɚ]					
#18. One-half of ten equals ...		[fɑˑᵻv] [faˑᵻv] [fɑᵻv]				
#19. In the courtroom silence was ordered by the ...			[dʒʌdʒ] [dʒɚdʒ] [dʒɑdʒ]			
#20. After the fire destroyed their home, the family had...				[nʌtIŋ] [nʌθIŋ]		
#21. Money you can't repay, you shouldn't ...	[bɑθ̣θ] [bɑɚθ]					
#22. When dinner was ready, she invited us to sit ...		[dɑʊn] [dâun]				

4. Third-person singular inflection: He (*don't* ∿ *doesn't*) like to work.

5. Preterit inflection: She (*dived* ∿ *dove*) into the pool.

6. Past-participle inflection: He had (*drunk* ∿ *drank*) the water.

7. Unorthodox use of the verb *be*: I (*am* ∿ *be*) going home.

8. Adjective inflection for the comparative and superlative degrees: He can speak (*better* ∿ *more better*) than I.

Standard and deviant forms representative of the foregoing inflectional types, as well as the double negative, were recorded in random order in sentences on the dialect test tape. The scripts of the pronunciation and grammar dialect tape recordings are given in Appendix C.

Attitude scales on which listeners record their feelings about the various pronunciations and grammatical forms comprise the second part of the instrument used to elicit subjective responses. Because the primary purpose of this study is to identify dialect features affecting the social mobility and economic opportunities of the disadvantaged, the scales should measure attitudes of listeners toward language features as they feel these features are associated with job potentiality, social acceptance, educational level, and ethnic identity. These dimensions of social mobility and economic opportunity determined the nature of the following scales, which are based on Osgood's semantic differential:[6]

extremely quite slightly slightly quite extremely

EDUCATED 1 : 2 : 3 : 4 : 5 : 6 UNEDUCATED
FRIENDLY 1 : 2 : 3 : 4 : 5 : 6 UNFRIENDLY
WHITE 1 : 2 : 3 : 4 : 5 : 6 MEXICAN-AMERICAN
WHITE 1 : 2 : 3 : 4 : 5 : 6 NEGRO
PROFESSIONAL 1 : 2 : 3 : 4 : 5 : 6 UNSKILLED WORKER

The scales are arranged here in the same scoring direction, with scoring values indicated for each space. However, the positions of the semantic terms for each scale were randomized on the response sheets, resulting in the left and right ends of each scale reading as follows: Educated/Uneducated; Unfriendly/Friendly; Mexican-American/White; White/Negro; Unskilled Worker/Professional. Also, the order of presentation of the scales on the response sheets was randomized to reduce the effects of a particular pattern of presentation. The instructions to the respondents for marking the attitude scales as they listen to the tape recording and a sample page of the response sheets are in Appendix C.

So that an estimate of the reliability of judgments on the scales could be made, ten pronunciation and ten grammar items were administered twice to three groups of respondents. These groups represented the upper middle-class Anglo-Americans, lower-class Black-Americans, and lower-class Mexican-Americans. Shortly after responding to all pronunciation and grammar items, each of these groups was asked to respond again to the last ten pronunciation and the last ten grammar items. Because a task was interpolated between the first test and the **retest** (the respondents had completed the grammar test before going back to pronunciation and, likewise, had completed the **retest** on pronunciation before taking the **retest** on grammar), one would expect little memory retention from the original test to the retest.

Table 31 gives the test-retest correlation coefficients of individual responses for three groups on the five scales for pronunciation. Correlation coefficients range from .59 to .91, indicating that the individual raters are adequately consistent in their responses and that the instrument is reasonably reliable.

Table 32 gives the test-retest correlation coefficients of individual responses for three groups on the five scales for grammar. Correlation coefficients range from .54 to .92, indicating that the instrument is reasonably reliable in eliciting responses to inflectional forms.

Selection of Respondents

Eight groups of respondents were asked to listen to the tape recording of contrasting pronunciation and grammatical features. These groups are a representative sampling from arbitrarily defined populations considered to be vital in determining the social, economic, and cultural opportunities of disadvantaged groups. In this study these populations are the following:

1. Upper middle-class Anglo-Americans
2. Upper middle-class Black-Americans
3. Lower-class Anglo-Americans
4. Lower-class Black-Americans
5. Lower-class Latin-Americans
6. Elementary school teachers
7. High school English teachers
8. Owners of businesses, business managers, and personnel directors

Table 31. Correlation of Individual Responses on the Last Ten Items of the Pronunciation Test.

N(number of paired individual responses) = 100 for first three scales

N(number of paired individual responses) < 100 for last two scales

Scales	Correlation Coefficients (r)		
	Upper Middle-Class Anglo-American Group	Lower-Class Black-American Group	Lower-Class Latin-American Group
1. Educated > Uneducated	.77	.63	.67
2. Friendly > Unfriendly	.67	.61	.64
3. Professional > Unskilled Worker	.81	.71	.59
4. White > Mexican-American	.84	.82	.73
5. White > Negro	.91	.89	.85

Table 32. Correlation of Individual Responses on the Last Ten Items of the Grammar Test.

N(number of paired individual responses) = 100 for first three scales

N(number of paired individual responses) < 100 for last two scales

Scales	Correlation Coefficients (r)		
	Upper Middle-Class Anglo-American Group	Lower-Class Black-American Group	Lower-Class Latin-American Group
1. Educated > Uneducated	.92	.76	.72
2. Friendly > Unfriendly	.85	.69	.55
3. Professional > Unskilled Worker	.89	.73	.77
4. White > Mexican-American	.75	.61	.65
5. White > Negro	.79	.59	.54

As mentioned in Chapter I, the rationale for the selection of these populations is based upon a consideration of social forces affecting the life possibilities of disadvantaged groups. Because militant leaders of minority groups are viewing prestigious dialects as part of an oppressive culture, the attitudes of lower-class ethnic groups toward standard dialects are crucial in attempts at dialect engineering. Also, since teachers bear the prime responsibility for developing bidialectal skills in minority groups, their attitudes toward subcultural varieties of language are important. Likewise, subjective evaluations of variant dialect features by employers affect the economic possibilities of disadvantaged groups.

Statistical Analysis

The data generated by the presentation of the dialect test tape to the eight groups of respondents was analyzed by two methods. A three-factor factorial design with repeated measures on two of the factors seemed appropriate for analyzing and interpreting the data for the uneducated/educated, friendly/unfriendly, and professional/unskilled worker scales. For the data generated by the White/Mexican-American and White/Negro scales, the use of the chi square statistic was considered more appropriate and expedient because of an unequal number of responses to each item by respondents in each group. This resulted when respondents felt strongly that an item was spoken by a Negro or Mexican-American and thus marked the White/Mexican-American scale or the White/Negro scale, but not both scales. Because the available computer program for the three-factor repeated measure design would not handle unequal cell frequencies, these two scales were dichotomized and subjected to the chi square test. A response in any one of the three spaces on the left side of the Mexican-American/White scale was counted as an identification of the speaker as Mexican-American. A response in any one of the three spaces on the right side of the scale was counted as an identification of the speaker as Anglo-American. The same procedure was applied to the White/Negro scale. The reduction of continuous data from these two scales to two categories permits an application of the chi square test.[7]

Analysis of Data for Pronunciation on the Criterion of Ethnic Identity

In the following discussion, the six speakers who cooperated in recording the dialect test tape are referred to by means of the accompanying code:

AA_1 = upper middle-class Anglo-American

AA_2 = upper middle-class Anglo-American who gives both standard and nonstandard pronunciations

BA_1 = upper middle-class Black-American

BA_2 = lower-class Black-American who is a recent arrival

BA_3 = lower-class Black-American who is a native

LA_1 = middle-class Latin-American who gives both standard and nonstandard pronunciations

The reactions of respondents to paralinguistic features within a single word must be taken into account in this experiment as one attempts to isolate the effects of phonetic and phonemic variation on subjective attitudes of listeners. In the Chicago dialect study, paralinguistic phenomena within a single word were found to affect reactions of listeners.[8] Paralinguistic phenomena, as defined by Austin, are "significant nonlinguistic noises made with the vocal tract."[9] Features which he identifies as paralanguage are (1) vocal qualifiers including tempo, pitch, and intensity; (2) vocal modifiers such as nasal and oral quality, slurred and clear articulation, and aspiration and glottalization; (3) vocal segregates which are based upon tone quality.

Inferences can be made regarding the relative effects of paralinguistic features within a single word by comparing the subjective responses of a group to the same pronunciation by different speakers. With the pronunciation of the word and experimental conditions held constant for both speakers, the major variable in this situation is paralanguage. Thus, any appreciable differences in subjective judgments on a scale such as ethnic identity could be attributed primarily to paralinguistic features.

Table 33 shows the per cent of the respondents identifying speakers AA_2 (an upper middle-class Anglo-American) and BA_1 (an upper middle-class Black-American) as Anglo-American, Black-American, or Latin-American in a randomized presentation on a tape recording of the same pronunciation of greasy by these speakers.

Table 33. Ethnic Identity Judgments by Respondents of Two Speakers Giving the Same Pronunciation of Greasy.

		Per cent of respondents identifying the speaker as			Chi square and per cent level of significance	
Speaker	Pronunciation	AA*	BA*	LA*	X^2	P
AA_2	[grisi]	85	8	7	91.28	> .001
BA_1	[grisi]	85	7	8	91.28	> .001

*AA = Anglo-American
BA = Black-American
LA = Latin-American

Eighty-five per cent of the respondents judged each speaker to be an Anglo-American. In this instance, the chi square statistic tests whether the respondents have classified speaker AA_2 by chance and whether they have classified BA_1 by chance. For both speakers the probability is remote (less than one in a thousand) that the distribution of ethnic identity judgments could occur by chance alone. It should be emphasized, however, that the chi square statistic is not testing the significance of difference (or similarity) of the ethnic identity judgments of these two speakers. Nevertheless, since the distribution of ethnic judgments for each speaker has a high level of significance, it appears that paralinguistic features are not a significant factor in influencing subjective judgments of ethnic identity in this instance.

On the other hand, inferences can be made regarding the relative effects of phonological features within a word by comparing the subjective responses of a group to the different pronunciations of the word by the same speaker. Under these conditions, appreciable differences in subjective judgments on a scale such as ethnic identity could be attributed largely to phonological features.

Table 34 shows the per cent of respondents identifying speaker LA_1 (a middle-class Latin-American) as Anglo-American, Black-American, or Latin-American for two pronunciations of chimney. For his standard pronunciation of chimney [tʃImni], fifty-three per cent of the respondents identify LA_1 as Latin-American, thus suggesting the influence of paralinguistic features. But when LA_1 pronounces the same word with the substitution of / l / for / n /, sixty-eight per cent of the respondents identify him as Black-American. Even though paralinguistic features seem to be present in LA_1's pronunciation of chimney [tʃImni], a phonemic change of / l / for / n / produces a distinct change in subjective judgment of ethnic identity. It is interesting, too, that the second pronunciation of chimney exposes what appears to be a language myth in this community, namely that the phoneme / l / in this word is characteristic of Black-American pronunciation. Actual usage in this community shows this language feature present in all ethnic groups.

Table 34. Ethnic Identity Judgments for One Speaker Giving Two Pronunciations of Chimney.

Speaker	Pronunciation	Per cent of respondents identifying the speaker as			Chi square and per cent level of significance	
		AA*	BA*	LA*	X^2	P
LA$_1$	[tʃImni]	12	34	53	19.28	> .001
LA$_1$	[tʃImli]	22	68	9	42.56	> .001

*AA = Anglo-American
BA = Black-American
LA = Latin-American

BA$_1$ is consistently identified as Anglo-American when he gives the standard pronunciation. By contrast, BA$_2$ and BA$_3$ (lower-class Black-Americans) are consistently classed as Black-Americans when they use nonstandard pronunciations. Table 35 shows ninety-four per cent of the respondents identifying BA$_1$ as Anglo-American for the standard pronunciation four [for] and ninety-six per cent of the respondents classifying BA$_3$ as Black-American for the nonstandard pronunciation [fo]. A similar discrimination is made for the pronunciation of police. Eighty-four per cent of the respondents judge BA$_1$'s standard pronunciation [po'lis] to be Anglo-American; whereas eighty-three per cent of the respondents believe BA_2's pronunciation ['polis] to be Black-American.

Table 35. Ethnic Identity by Respondents of Black-American Speakers Giving Different Pronunciations of For and Police.

Speaker	Word and Pronunciation	Per cent of respondents identifying the speaker as			Chi square and per cent level of significance	
		AA*	BA*	LA*	χ^2	P
BA_1	for [for]	94	4	2	119.10	<.001
BA_3	for [fo]	1	96	3	124.59	<.001
BA_1	police [po'lis]	84	4	12	89.24	<.001
BA_2	police ['polis]	11	83	6	84.18	<.001

*AA = Anglo-American
BA = Black-American
LA = Latin-American

This evidence suggests that certain contrasting phonological features (constricted / r / ∿ loss of r; stress on second syllable of police ∿ stress on first syllable) are more powerful than possible paralinguistic features in Black-American speech in evoking subjective judgments of ethnic identity in this community. This is not to say that complex paralinguistic features are not present - as a matter of fact, there is additional evidence to suggest paralinguistic influence - but rather to suggest that phonological features are clearly affecting subjective judgments of the respondents.

Another generalization can be made from the data for subjective ethnic judgments. Many, though not all, linguists have long insisted that the speech of Black-Americans is not a distinct entity and that it does not differ significantly from the speech of Anglo-Americans of the same educational, social, and economic background. As previously pointed out, respondents consistently classified BA_1 (an upper middle-class Black-American) as an Anglo-American. It would thus appear that educational and economic background are prime factors in shaping the linguistic behavior of Black-Americans.

Analysis of Data for Pronunciation on the Criteria of Educational Level and Job Potentiality

The Experimental Design. As mentioned earlier, a three-factor factorial design with repeated measures on factors B and C was considered appropriate for the analysis of the data for the educated/uneducated, friendly/unfriendly, and professional/unskilled worker scales. Table 36 gives a schematic representation of the design used for pronunciation.[10] The same design was used for grammar except that the levels of B were reduced to 13.

Factor A in this design is a series of eight levels (socio-economic-cultural groups) closely interrelated in determining the social and economic opportunities of disadvantaged individuals in a typical urban center. These levels are designated as follows:

A_1 = Upper middle-class Anglo-Americans
A_2 = Upper middle-class Black-Americans
A_3 = Lower-class Anglo-Americans
A_4 = Lower-class Black-Americans
A_5 = Lower-class Latin-Americans
A_6 = Elementary school teachers

(continued)

Table 36. Schematic Representation of the Experimental Design Used for Pronunciation

	Subjects	b_1		...	b_{22}	
		C_1	C_2		C_1	C_2
A_1	1 . . . 10	X_{1111} X_{1112} X_{1113}				
. . .						
A_8						

A_7 = High school English teachers

A_8 = Owners of businesses, business managers, and personnel directors

Factor B has twenty-two levels composed of morphemic words representing significant phonological variables in the dialects of the urban community investigated. These levels are the following:

B_1 = aunt
B_2 = borrow
B_3 = can't
B_4 = chair
B_5 = chimney
B_6 = cobweb
B_7 = daughter
B_8 = down
B_9 = five
B_{10} = four
B_{11} = good
B_{12} = greasy
B_{13} = hers
B_{14} = judge
B_{15} = man
B_{16} = nothing
B_{17} = oil
B_{18} = police
B_{19} = sheep
B_{20} = this
B_{21} = umbrella
B_{22} = wash

Factor C represents phonetic variation and has two levels composed of alternate pronunciations heard in the dialects of the community investigated.

C_1 = actual pronunciation of a word

C_2 = actual alternate pronunciation of the same word

In each group (levels of factor A), there are ten subjects. Each of these subjects is observed on three criteria as measured on the attitude scales marked by the subject as he hears the pronunciation: (1) educated/uneducated, (2) friendly/unfriendly, (3) professional/unskilled worker. X_{1111} in Table 36 represents a particular subject in Group A_1 (upper middle-class Anglo-American) observed on one of the three attitude scales for factors b_1c_1 (a specific pronunciation).

Correlation of the Scales. Intercorrelations of the three scales (Table 37) shows that the educated/uneducated and professional/unskilled worker scales provide essentially the same information; whereas the low correlation of the friendly/unfriendly scale with each of the other scales indicates that this scale provides additional information. Therefore, to avoid unnecessary duplication of work, only the data for the educated/uneducated and friendly/unfriendly scales will be analyzed in depth (Note: These correlations are averages taken across levels of B.).

Table 37. Intercorrelation of Scales for Pronunciation.

	1	2	3
1	1.00	.33	.74
2		1.00	.32
3			1.00

1 = educated/uneducated scale
2 = friendly/unfriendly scale
3 = professional/unskilled worker scale

Analysis of Variance. Table 38 is a summary of the analysis of variance for pronunciation for the data generated by the uneducated/educated attitude scale. Observed F ratios are significant at the .01 level for the main effects of A, B, and C and the interaction of AB, BC, and ABC. Further, interaction AC is significant at the .05 level. Table 39, the summary of analysis of variance for pronunciation on the data from the professional/unskilled worker scale, also shows statistically significant main effects, except for factor A, and significant interactions at the .01 level. With significant interaction effects present, as in this instance, inferences concerning main effects must, as best, be made with caution.[11] Rather, attention should be given to examining interaction effects. But interaction effects can best be studied by examining the simple main effects. Such an examination of simple main effects amounts to breaking down interactions into component parts. Furthermore, conclusions of value for developing English usage programs for disadvantaged groups can best come from studying the sources of interaction effects in this experiment. For example, an awareness of the types of dialect variants most likely to stigmatize individuals in an urban community would provide a basis for establishing priorities in an English usage educational program. The answer to this kind of question is to be found partially in discovering how different socio-economic-cultural groups react to a specific type of phonological variant. In terms of this experimental design, the answer may be found in examining the simple main effects of A at levels of B and C.

Also, for practical purposes in teaching English usage, a knowledge of whether a particular socio-economic-cultural group differentiates in its subjective evaluation of variant forms of pronunciation and

Table 38. Summary of Analysis of Variance for Pronunciation on the Criterion of Educational Level (Educated/Uneducated Attitude-Scale Measure).

Source of Variation	SS	df	MS	Observed F	Critical F
Between subjects					
A	154.8807	7	22.1258	3.0448**	**F(.99) = 2.90
Subjects w. groups / error (a) /	523.2000	72	7.2667		
Within subjects					
B	1084.9216	21	51.6629	34.3138**	**F(.99) = 1.84
AB	399.6693	147	2.7188	1.8057**	**F(.99) = 1.30
B x subj. w. groups / error (b) /	2276.5000	1512	2.7188		
C	1929.3284	1	1929.3284	622.2435**	**F(.99) = 6.99
AC	61.1534	7	8.7362	2.8175*	*F(.95) = 2.14
C x subj. w. groups / error (c) /	223.2455	72			
BC	1740.0966	21	82.8617	55.8617**	**F(.99) = 1.84
ABC	353.7216	147	2.4063	1.6145**	**F(.99) = 1.30
BC x subj. w. groups / error (bc) /	2253.4545	1512	1.4904		

Table 39. **Summary of Analysis of Variance for Pronunciation on the Criterion of Job Potentiality (Professional/Unskilled Attitude-Scale Measure).**

Source of Variation	SS	df	MS	Observed F	Critical F
Between subjects					
A	72.3170	7	10.3310	1.7207	
Subjects w. groups / error (a) /	432.2636	72	6.0037		
Within subjects					
B	960.8648	21	45.7555	33.1321**	**F(.99) = 1.84
AB	406.5080	147	2.7654	2.0024**	**F(.99) = 1.30
B x subj. w. groups / error (b) /	2088.0364	1512	1.3810		
C	1625.4727	1	1625.4727	456.8758**	**F(.99) = 6.99
AC	75.8636	7	10.8377	3.0461**	**F(.99) = 2.90
C x subj. w. groups / error (c) /	256.1636	72	3.5578		
BC	1665.5273	21	79.3108	54.8370**	**F(.99) = 1.84
ABC	297.2364	147	2.0220	1.3980**	**F(.99) = 1.30
BC x subj. w. groups / error (bc) /	2186.7364	1512	1.4463		

grammatical inflection would be useful. In this experimental design, the answer to this kind of question may be found by studying the simple main effects of C at levels of A and B.

Slight Phonetic Variation

Table 40 summarizes the statistical analysis for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of daughter as [dɔd̥ɚ] (c_1) and also to the pronunciation of daughter as [dɔd̬ɚ] (c_2). Since F tests at the .05 level show no significant differences, one may conclude that neither of these pronunciations elicits measurably different subjective evaluations on the educated/uneducated scale among the eight groups.

Table 40. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Slight Phonetic Variation

b_7 = slight phonetic variations c_1 = [dɔd̥ɚ]

c_2 = [dɔd̬ɚ]

Source of Variation	SS	df	MS	F
A for level b_7c_1	21.39	7	3.06	1.83
A for level b_7c_2	7.19	7	1.03	.62

F tests at the .05 level of significance on the simple main effects of C at levels of A and B for slight phonetic variation (Table 41) show no significant differences. Thus, minor phonetic variations as represented by [dɔt̬ɚ ∿ dɔd̥ɚ] do not evoke in any of the socio-economic-cultural groups measurably different subjective evaluations of education.

Table 41. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Slight Phonetic Variations.

$a_{1...8}$ = groups of respondents
b_7 = slight phonetic variations

Source of Variation	SS	df	MS	F
C for level a_1b_7	8.45	1	8.45	2.73
C for level a_2b_7	.00	1	.00	.00
C for level a_3b_7	.45	1	.45	.15
C for level a_4b_7	.20	1	.20	.06
C for level a_5b_7	7.21	1	7.21	2.32
C for level a_6b_7	5.95	1	5.95	1.95
C for level a_7b_7	5.01	1	5.01	1.61
C for level a_8b_7	5.95	1	5.95	1.95

Marked Phonetic Variation

Table 42 summarizes the ANOV* for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of five as [fɑɨv] (c_1) and also to the pronunciation of five as [fa·^{ɨ}v] (c_2). Since F tests at the .05 level show no significant differences, one may conclude that neither of these pronunciations elicits measurably different subjective evaluations on the educated/uneducated scale among the eight groups.

F tests at the .01 level of significance on the simple main effects of C at levels of A and B for marked phonetic variation (Table 43) show significant differences for all groups, except a_4, which is significant

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*Analysis of variance

Table 42. **Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Marked Phonetic Variation in Five.**

b_9 = marked phonetic variation c_1 = [fɑɨv]

c_2 = [fa·ᶤv]

Source of Variation	SS	df	MS	F
A for level b_9c_1	5.20	7	5.20	.74
A for level b_9c_2	22.29	7	3.18	1.91

Table 43. **Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Marked Phonetic Variation in Five.**

$a_{1...8}$ = groups of respondents

b_9 = marked phonetic variation

Source of Variation	SS	df	MS	F
C for level a_1b_9	51.19	1	51.19	16.51**
C for level a_2b_9	26.45	1	26.45	8.53**
C for level a_3b_9	20.00	1	20.00	6.45*
C for level a_4b_9	18.05	1	18.05	5.82*
C for level a_5b_9	26.44	1	26.44	8.53**
C for level a_6b_9	31.26	1	31.26	10.08**
C for level a_7b_9	33.81	1	33.81	10.90**
C for level a_8b_9	68.45	1	68.45	22.08**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

at the .05 level. Thus, major phonetic variations as represented by [ɑɨ ∿ a·^{ɨ}] do evoke in all of the socio-economic-cultural groups measurably different subjective evaluations on the educated/uneducated scale.

Incidental Phonemic Variation

Table 44 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of greasy as [grizi] (c_1) and also to the pronunciation of greasy as [grisi] (c_2). The F test for the simple main effect of A for level $b_{12}c_1$ is not significant; thus, one may conclude that the pronunciation [grizi] does not evoke measurably different subjective evaluations on the educated/uneducated scale among the eight groups. However, the F test for level $b_{12}c_2$ is significant at the .01 level. Since the highest mean rating on the educated/uneducated scale was 5.9 by the upper middle-class Anglo-Americans and the lowest mean rating was 3.7 by the lower-class Black-American group, it seems that the upper middle-class values the

Table 44. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Incidental Phonemic Variation of / s ∿ z / in Greasy.

b_{12} = incidental phonemic variation c_1 = [grizi]

C_2 = [grisi]

Source of Variation	SS	df	MS	F
A for level $b_{12}c_1$	14.99	7	2.14	1.29
A for level $b_{12}c_2$	43.59	7	6.23	3.74**

**F .99(7,3168) = 2.64

/ s / phoneme in greasy highly while the Black-American group downgrades this pronunciation. One might anticipate such a reaction on the part of the Black-American respondents because many have recently migrated from a dialect region in which the / z / phoneme predominates.

F tests at the .01 level of significance on the simple main effects of C at levels of A and B for marked phonemic variation (Table 45) show significant differences for a_1 and a_7. Group a_3 and a_8 show significant differences at the .05 level. Thus, incidental phonemic variation as represented by / s ∿ z / in greasy does evoke in the upper middle-class Anglo-American, lower-class Anglo-American, high school English teacher, and personnel director groups measurably different subjective evaluations on the educated/uneducated scale. Thus, the / z / phoneme in greasy

Table 45. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Incidental Phonemic Variation of / s ∿ z / in Greasy.

$a_{1...8}$ = groups of respondents

b_{12} = incidental phonemic variation

Source of Variation	SS	df	MS	F
C for level a_1b_{12}	45.00	1	45.00	14.51**
C for level a_2b_{12}	3.21	1	3.21	1.03
C for level a_3b_{12}	18.05	1	18.05	5.82*
C for level a_4b_{12}	.20	1	.02	.06
C for level a_5b_{12}	4.05	1	4.05	1.31
C for level a_6b_{12}	8.45	1	8.45	2.73
C for level a_7b_{12}	26.54	1	26.54	8.53**
C for level a_8b_{12}	20.01	1	20.01	6.45*

*F .95(1,72) = 3.98

**F .99(1,72) = 7.00

is a social marker in this community. It is also interesting to note that the subjective evaluation of English teachers is consistent with that found in the upper middle-class and the business community.

Table 46 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of wash as [wɔʃ] (c_1) and also to the pronunciation of wash as [wɔɚʃ] (c_2). The F test for the simple main effect of A for level $b_{22}c_1$ is significant. The two highest mean ratings on the educated/uneducated scale are 5.5 by the businessmen and 4.5 by the upper middle-class Anglo-Americans while the lowest is 3.3 by the lower-class Latin-Americans. Here is an instance of a lower-class group apparently not sensitive to a prestigious pronunciation. On the other hand, the F test for the simple main effect of A for level $b_{22}c_2$ is not significant. The mean scores for all groups for the pronunciation of wash with the intrusive / r / are uniformly low, showing agreement on downgrading this variant.

Table 46. Summary of Analysis of Variance of Simple Main Effects of A at Levels of B and C for Incidental Phonemic Variation of /ɔ ~ ɔr / in Wash.

b_{22} = incidental phonemic variation

c_1 = [wɔʃ]

c_2 = [wɔɚʃ]

Source of Variation	SS	df	MS	F
A for level $b_{22}c_1$	33.21	7	4.74	2.85**
A for level $b_{22}c_2$	9.59	7	1.37	.82

**F .99(7,3168) = 2.64

F tests on the simple main effects of C at levels of A and B for incidental phonemic variation in wash show significant differences at the .05 or .01 level for all groups except a_5. Consequently, all groups except the lower-class Latin-Americans recognize the intrusive / r / in wash as a social marker.

Table 47. Summary of Analysis of Variance of Simple Main Effects of C at Levels of A and B for Incidental Phonemic Variation of / ɔ ~ ɔr / in Wash.

$a_{1...8}$ = groups of respondents

b_{22} = incidental phonemic variation

Source of Variation	SS	df	MS	F
C for level a_1b_{22}	48.04	1	48.04	15.50**
C for level a_2b_{22}	33.81	1	33.81	10.91**
C for level a_3b_{22}	48.05	1	48.05	15.50**
C for level a_4b_{22}	45.01	1	45.01	14.51**
C for level a_5b_{22}	2.45	1	2.45	.79
C for level a_6b_{22}	42.03	1	42.03	13.56**
C for level a_7b_{22}	18.06	1	18.06	5.82*
C for level a_8b_{22}	72.19	1	72.19	23.29**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 48 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of judge as [dʒʌdʒ] (c_1) and also to the pronunciation of judge as [dʒɝdʒ] (c_2). Since F tests show no significant differences, one may conclude that neither of these pronunciations elicits measurably different subjective evaluations on the educated/uneducated scale among the eight groups.

Table 48. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Incidental Phonemic Variation of / ʌ ∼ ɜ / in Judge.

b_{14} = incidental phonemic variation c_1 = [dʒʌdʒ]

c_2 = [dʒɝdʒ]

Source of Variation	SS	df	MS	F
A for level $b_{14}c_1$	10.99	7	1.57	.94
A for level $b_{14}c_2$	22.40	7	3.20	1.92

F tests on the simple main effects of C at levels of A and B for incidental phonemic variation of vowels in judge (Table 49) show significant differences at the .05 or .01 level. The means on the educated/uneducated rating scale uniformly show a higher subjective evaluation of the pronunciation of [dʒʌdʒ] than for [dʒɝdʒ]. Thus, all groups recognize the pronunciation [dʒɝdʒ] as a social marker.

Systematic Phonemic Variation

Table 50 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of chair as [tʃɛr] (c_1) and also to the pronunciation of chair as [ʃɛr] (c_2). The F test for the simple main effect of A for level b_4c_1 is significant. The highest mean rating on the educated/uneducated scale is 4.8 by the upper middle-class Black-Americans while the lowest is 2.6 by the lower-class Latin-Americans. As mentioned in Chapter III, lower-class

Table 49. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Incidental Phonemic Variation of / ʌ ∼ ɜ / in Judge.

$a_{1...8}$ = groups of respondents

b_{14} = incidental phonemic variation

Source of Variation	SS	df	MS	F
C for level a_1b_{14}	57.80	1	57.80	18.64**
C for level a_2b_{14}	33.81	1	33.81	10.90**
C for level a_3b_{14}	12.82	1	12.82	4.13*
C for level a_4b_{14}	42.05	1	42.05	13.57**
C for level a_5b_{14}	18.15	1	18.15	5.82*
C for level a_6b_{14}	39.19	1	39.19	12.64**
C for level a_7b_{14}	20.00	1	20.00	6.45*
C for level a_8b_{14}	42.04	1	42.04	13.56**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 50. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Systematic Phonemic Variation of / č ∼ š / in Chair.

b_4 = systematic phonemic variation

c_1 = [tʃɛr]

c_2 = [ʃɛr]

Source of Variation	SS	df	MS	F
A for level b_4c_1	64.49	7	9.21	5.53**
A for level b_4c_2	10.55	7	1.57	.27

**F .99(7,3168) = 2.64

Latin-Americans frequently have difficulty mastering the / č / phoneme; their rather consistent substitution of / š / for / č / apparently makes them insensitive to the prestigious pronunciation using / č /. On the other hand, the F test for the simple main effect of A for level b_4c_2 is not significant.

F tests on the simple main effects of C at levels of A and B for systematic phonemic variation in chair (Table 51) show significant differences at the .01 level for groups a_1, a_2, a_3, and a_4. The substitution / š / for the phoneme / č / is a social marker but is not recognized as such by the lower-class Latin-Americans and the English teachers sampled in this community.

Table 51. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Systematic Phonemic Variation of / č ∿ š / in Chair.

$a_{1...8}$ = group of respondents

b_4 = systematic phonemic variation

Source of Variation	SS	df	MS	F
C for level a_1b_4	33.80	1	33.80	10.90**
C for level a_2b_4	22.05	1	22.05	7.11**
C for level a_3b_4	22.05	1	22.05	7.11**
C for level a_4b_4	22.06	1	22.06	7.12**
C for level a_5b_4	.20	1	.20	.06
C for level a_6b_4	4.05	1	4.05	1.31
C for level a_7b_4	7.21	1	7.21	2.32
C for level a_8b_4	2.45	1	2.45	.79

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 52 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of four as [for] (c_1) and also to the pronunciation of four as [fo] (c_2). Since F tests show no significant differences, one may conclude that neither of these pronunciations evokes measurably different subjective evaluations on the educated/uneducated scale among the eight groups.

Table 52. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Systematic Phonemic Variations of / r ∿ loss of r / in Four.

b_{10} = systematic phonemic variation

c_1 = [for]

c_2 = [fo]

Source of Variation	SS	df	MS	F
A for level $b_{10}c_1$	19.21	7	2.74	1.64
A for level $b_{10}c_2$	19.97	7	2.85	1.71

F tests on the simple main effects of C at levels of A and B for systematic phonemic variation of / r ∿ loss of r / in four show significant differences at the .05 or .01 level for all groups except a_5. Thus, one may conclude that all groups except the lower-class Latin-Americans recognize the loss of the / r / in four as a social marker.

Table 54 summarizes the ANOV for the subjective responses for the eight socio-economic-cultural groups to the pronunciation of nothing as [nʌθIŋ] (c_1) and also to the pronunciation of nothing as [nʌtIŋ] (c_2). Since the F tests show no significant differences, one may conclude that neither of these pronunciations elicits measurably different subjective evaluations on the educated/uneducated scale among the groups.

Table 53. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Systematic Phonemic Variation of / r ∿ loss of r / in Four.

$a_{1...8}$ = groups of respondents

b_{10} = systematic phonemic variation

Source of Variation	SS	df	MS	F
C for level a_1b_{10}	26.44	1	26.44	11.76**
C for level a_2b_{10}	33.80	1	33.80	10.90**
C for level a_3b_{10}	26.46	1	26.46	5.62*
C for level a_4b_{10}	64.81	1	64.81	20.89**
C for level a_5b_{10}	8.45	1	8.45	2.72
C for level a_6b_{10}	54.44	1	54.44	17.56**
C for level a_7b_{10}	22.05	1	22.05	7.11**
C for level a_8b_{10}	58.80	1	58.80	18.64**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 54. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Systematic Phonemic Variation of / θ ∿ t / in Nothing.

b_{16} = systematic phonemic variation

c_1 = [nʌθIŋ]

c_2 = [nʌtIŋ]

Source of Variation	SS	df	MS	F
A for level $b_{16}c_1$	8.79	7	1.26	.75
A for level $b_{16}c_2$	16.19	7	2.31	1.38

F tests on the simple main effects of C at levels of A and B for systematic phonemic variation (Table 55) show significant differences for all groups except a_5. Therefore, all groups except the lower-class Latin-Americans recognize the substitution of / t / for / θ / as a social marker.

Table 55. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Systematic Phonemic Variation of / θ ~ t / in Nothing.

$a_{1...8}$ = groups of respondents

b_{16} = systematic phonemic variation

Source of Variation	SS	df	MS	F
C for level a_1b_{16}	28.81	1	28.81	9.29**
C for level a_2b_{16}	14.45	1	14.45	4.66*
C for level a_3b_{16}	14.45	1	14.45	4.66*
C for level a_4b_{16}	14.45	1	14.45	4.66*
C for level a_5b_{16}	6.04	1	6.04	1.95
C for level a_6b_{16}	42.05	1	42.05	13.56**
C for level a_7b_{16}	16.20	1	16.20	5.22*
C for level a_8b_{16}	45.01	1	45.01	14.51**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 56 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of cobweb ['kɑbwɛb] (c_1) and also to the pronunciation of cobweb as ['kɑb'wɛb] (c_2). The F test for the simple main effect of A for levels of b_6c_1 is not significant; however, the test for b_6c_2 is statistically significant.

The two highest mean ratings on the educated/uneducated scale are 4.8 and 4.5 by the upper middle-class and lower-class Black-American groups while the two lowest mean ratings are 1.7 and 2.5 by the upper middle-class Anglo-American and English teacher groups. Although tests for significant differences among means would have to be made to determine whether these differences are statistically significant, the contrast in judgments between the upper middle-class Anglo-Americans and Black-Americans appears to be greater for suprasegmental variation than for any other type of phonological variation thus far examined. The lower mean rating of 3.6 assigned by the lower-class Latin-American respondents suggests that the shift of stress to the second syllable in compound nouns characteristic of this group is recognized by them as a nonstandard form.

Table 56. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Suprasegmental Variation

b_6 = suprasegmental variation

c_1 = [ˈkɑbwɛb]

c_2 = [ˈkɑbˈwɛb]

Source of Variation	SS	df	MS	F
A for levels of b_6c_1	8.69	7	1.24	.75
A for levels of b_6c_2	76.60	7	10.94	6.57**

**F .99(7,72) = 2.90

F tests on the simple main effects of C at levels of A and B for suprasegmental variation in cobweb (Table 57) show significant differences at the .05 or .01 level except for groups a_2 and a_4. Thus, the Black-American groups apparently do not recognize this back shift in stress as a social marker.

Table 57. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Suprasegmental Variation.

$a_{1...8}$ = groups of respondents

b_6 = suprasegmental variation

Source of Variation	SS	df	MS	F
C for level a_1b_6	61.25	1	61.25	19.75**
C for level a_2b_6	.45	1	.45	.14
C for level a_3b_6	14.45	1	14.45	4.66*
C for level a_4b_6	.45	1	.45	.14
C for level a_5b_6	12.80	1	12.80	4.13*
C for level a_6b_6	36.44	1	36.44	11.75**
C for level a_7b_6	28.81	1	28.81	9.29**
C for level a_8b_6	12.80	1	12.80	4.13*

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 58 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the pronunciation of umbrella as [əm'brɛlə] (c_1) and also to the pronunciation of umbrella as [ˌɑmbə'ɛlə] (c_2). The F test for the simple main effect of A for level $b_{21}c_1$ is not significant; however, the test for level $b_{21}c_2$ is statistically significant. The lower mean ratings on the educated/uneducated scale for the pronunciation of [ˌɑmbə'ɛlə] are found among the upper middle-class Anglo-Americans, Black-Americans, and school teachers. The higher ratings for the nonstandard pronunciation of [ˌɑmbə'ɛlə] are among the lower-class groups.

Table 58. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Suprasegmental Variation Combined with Phonemic Variation.

b_{21} = suprasegmental variation combined with phonemic variation

c_1 = [əm'brɛlə] c_2 = [ˌɑmbə'ɛlə]

Source of Variation	SS	df	MS	F
A for level $b_{21}c_1$	13.09	7	1.87	1.12
A for level $b_{21}c_1$	27.69	7	3.96	2.37*

*F .95(7,3168) = 2.01

F tests on the simple main effects of C at levels A and B for a combination of suprasegmental variation and phonemic variation in umbrella (Table 59) show significant differences at the .05 or .01 level for all groups except a_4. On the basis of the statistical analysis, all groups except the lower-class Black-Americans recognize this deviation from standard pronunciation involving a combination of suprasegmental and phonemic variation as a social marker.

Analysis of Data for Pronunciation on the Criterion of Social Distance (Friendly/Unfriendly Attitude Scale)

Analysis of Variance. Table 60 is a summary of the analysis of variance for pronunciation for the data generated by the friendly/unfriendly attitude scale. Observed F ratios are significant at the .01 level for the main effects of B and C and the interaction effects of AB, AC, BC, and ABC. With significant interaction effects present, one must again probe the simple main effects to gain insight into the sources of variation. Identification of statistically significant simple main effects on the criterion of social distance may have pedagogically

Table 59. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Suprasegmental Variation Combined with Phonemic Variation

$a_{1...8}$ = groups of respondents

b_{21} = suprasegmental variation combined with phonemic variation

Source of Variation	SS	df	MS	F
C for level a_1b_{21}	28.81	1	28.81	9.29**
C for level a_2b_{21}	26.45	1	26.45	8.53**
C for level a_3b_{21}	12.80	1	12.80	4.13*
C for level a_4b_{21}	11.24	1	11.24	3.63
C for level a_5b_{21}	12.80	1	12.80	4.13*
C for level a_6b_{21}	28.79	1	28.79	9.29**
C for level a_7b_{21}	33.81	1	33.81	10.90**
C for level a_8b_{21}	28.82	1	28.82	9.29**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

important implications. Although lower-class groups may recognize standard forms associated with educated usage but fail to command these features in their own speech, this very lack of stylistic variation may give them a feeling of hostility toward standard usage. This feeling suggests a facet of the problem of motivating lower-class groups to develop skill in the use of standard forms. Some insight into the extent of this problem may be gained by studying simple main effects in this experimental design.

Only a few statistically significant differences for simple main effects of A for levels of B and C for pronunciation on the criterion of

Table 60. Summary of Analysis of Variance for Pronunciation on the Criterion of Social Distance (Friendly/Unfriendly Attitude-Scale Measure).

Source of Variation	SS	df	MS	Observed F	Critical F
Between subjects					
A	245.9679	7	35.1383	1.5993	
Subjects w. groups / error (a) /	1581.8614	72	21.9703		
Within subjects					
B	193.0741	21	9.1940	5.7369**	**F(.99) = 1.84
AB	635.3509	147	2.4854	1.5508**	**F(.99) = 1.30
B x subj. w. groups / error (b) /	2423.1886	1512	1.6026		
C	103.2980	1	103.2980	19.3586**	**F(.99) = 6.99
AC	122.0361	7	17.4337	3.2671**	**F(.99) = 2.90
C x subj. w. groups / error (c) /	384.1886	72	5.3360		
BC	272.3082	21	12.9671	8.7250**	**F(.99) = 1.84
ABC	193.6077	147	1.9973	1.3438**	**F(.99) = 1.30
BC x subj. w. groups / error (bc) /	2247.0614	1512	1.4862		

social distance were found. These are reported in Table 61.

As indicated in Table 61, the only types of phonological variation evoking statistically significant subjective responses on the friendly/unfriendly attitude scale among the eight socio-economic-cultural groups are systematic and incidental phonemic variations. The highest mean ratings on the friendly/unfriendly scale for chair [tʃɛr] (c_1) are found among the upper-class Anglo and Black-Americans and school teachers while the lowest rating is by the lower-class Latin-Americans. On the other hand, the highest mean rating on this scale for [ʃɛr] (c_2) is 4.8 by the lower-class Latin-Americans but the lowest mean rating is 3.1 by the upper-class Anglo-Americans. Although statistical tests have not been made on all possible pairs of means to determine significant differences, the trend is clear: the lower-class Latin-Americans tend to feel more friendly toward pronunciations which substitute / š / than they do toward the use of the standard / č /.

The F test for the simple main effect of A for levels $b_{12}c_2$ is significant at the .01 level. The highest mean rating on the friendly/unfriendly scale for greasy [grisi] is 5.7 by the upper middle-class Anglo-Americans but the lowest mean rating is 3.1 by the lower-class Black-Americans. Thus, the statistical trend of the difference between means suggests that lower-class Black-Americans tend to feel more friendly toward the pronunciation of greasy with the / z / phoneme rather than the / s / sound. This preference, of course, does reflect their actual usage.

As indicated in Table 61, the F test for simple main effect of A for level $b_{16}c_2$ is significant at the .05 level. The highest mean rating on the friendly/unfriendly scale for c_2 for nothing [nʌtIŋ] is 4.8

Table 61. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Pronunciation on the Social Distance Criterion.

Source of Variation	SS	df	MS	F
A for level b_4c_1 b_4 = systematic phonemic variation c_1 = [tʃɛr]	45.95	7	6.56	3.13**
A for level b_4c_2 b_4 = systematic phonemic variation c_2 = [ʃɛr]	166.40	7	23.77	11.35**
A for level $b_{12}c_2$ b_{12} = incidental phonemic variation c_2 = [grisi]	50.81	7	7.26	3.46**
A for level $b_{16}c_2$ b_{16} = systematic phonemic variation c_2 = [nʌtIŋ]	36.49	7	5.21	2.49*

*F .95(7,3168) = 2.01

**F .99(7,3168) = 2.64

by the upper-class Black-Americans; whereas the lowest mean rating is 2.9 by the upper-class Anglo-Americans. This difference in trend between means suggests a sharp cleavage along ethnic lines. The upper middle-class Anglo-Americans react to the substitution of the / t / phoneme for / θ / in the word nothing as an uneducated usage toward which they feel unfriendly. On the other hand, the upper-class Black-Americans recognize this substitution as uneducated usage but feel friendly toward its use.

Table 62 reports the statistically significant differences for simple main effects of C for levels of A and B for pronunciation on the criterion of social distance. Only a few significant differences were found. An inspection of Table 62 shows that the types of phonological variation having significance are marked phonetic, incidental phonemic, and systematic phonemic variation. Further inspection of the table reveals that only one group, the upper middle-class Anglo-Americans, views alternate pronunciations differentially on this scale.

For the pronunciation of five as [fɑɨv], the upper-class Anglo-American group gives a mean average rating of 5.7 on the friendly/unfriendly scale while they give a mean rating of 3.7 for the pronunciation of five as [fa·ᶤv]. These means are statistically significant at the .05 level; therefore, this prestigious social group has an unfriendly feeling toward the "slow" diphthong with the vanishing off-glide [fa·ᶤv] found in the dialects of many recent arrivals from the South.

The F test on the simple main effect of C at level a_1b_{13} are significant at the .01 level and indicate that the socially prestigious Anglo-American group differentiates on the friendly/unfriendly scale between the pronunciation of [hæ˃z] and [hæ˃s]. Thus, the

Table 62. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Pronunciation on the Social Distance Criterion.

Source of Variation	SS	df	MS	F
C for level a_1b_9 a_1 = upper middle-class respondents b_9 = marked phonetic variation	28.80	1	28.80	5.40*
C for level a_1b_{13} a_1 = upper middle-class respondents b_{13} = systematic phonetic variations	33.81	1	33.81	6.33*
C for level a_1b_{14} a_1 = upper middle-class respondents b_{14} = incidental phonemic variation	24.22	1	24.22	4.54*
C for level a_1b_{17} a_1 = upper middle-class respondents b_{17} = systematic phonemic variation	36.45	1	36.45	6.83*
C for level a_1b_{19} a_1 = upper middle-class respondents b_{19} = systematic phonemic variation	33.80	1	33.80	6.33*
C for level a_1b_{20} a_1 = upper middle-class respondents b_{20} = systematic phonemic variation	51.19	1	51.19	9.60**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

substitution of / s / for / z /, typical of lower-class Latin-American speakers, evokes negative response from the upper-class Anglo-American group in this community.

The pronunciation of judge [dʒʌdʒ] as contrasted to [dʒɝdʒ] produces a statistically significant different reaction in the upper-class Anglo-American group on the friendly/unfriendly scale. The mean rating on this scale by the prestigious Anglo-American group for the standard pronunciation is 4.8 as contrasted to 2.6 for the deviant pronunciation [dʒɝdʒ].

Likewise, the subjective responses of the upper-class Anglo-American group to the pronunciations for oil, [ɔɪɫ] and [ɔˑɫ], on the friendly/unfriendly scale show this group differentiating strongly in favor of the standard pronunciation [ɔɪɫ]. The deviant pronunciation [ɔˑɫ] is heard frequently in the dialects of recent lower-class Black-American arrivals.

The lower-class Latin-American substitution of the phoneme / č / for / š / in such words as sheep also elicits a negative response from the upper middle-class Anglo-Americans on the friendly/unfriendly scale. The evidence for this generalization is the simple main effect of C for level a_1b_{19}. For the two pronunciations of sheep, [ʃip] and [tʃip], the upper-middle class Anglo-Americans give significantly different ratings of 5.3 for the standard form and 2.7 for the nonstandard form on this scale.

The F test for the simple main effect of C for level a_1b_{20} is significant at the .01 level and indicates that the upper middle-class Anglo-American group reacts unfavorably on the friendly/unfriendly scale to the substitution of the phoneme / d / for / ð / in such words as this and those.

Analysis of Data for Grammar on the Criteria of Educational Level and Job Potentiality

The Experimental Design. The experimental design for the study of pronunciation was also used for the investigation of grammatical inflection; however, the levels of B were reduced from 22 to 13. Factor A remains the same: eight socio-economic-cultural groups. The thirteen levels of B are composed of English grammatical inflections as follows:

b_1 = noun genitive inflection
b_2 = intensive pronoun inflection
b_3 = adjective inflection for comparative and superlative degree
b_4 = preterit inflection
b_5 = third-person singular inflection
b_6 = double negative
b_7 = relative pronoun inflection
b_8 = personal pronoun inflection
b_9 = noun plural inflection
b_{10} = demonstrative pronoun inflection
b_{11} = preterit inflection
b_{12} = past-participle inflection
b_{13} = unorthodox use of verb be

Factor C has two levels composed of alternate grammatical inflections heard in the dialects of the community investigated.

c_1 = actual grammatical inflection of a word
c_2 = actual alternate grammatical inflection of the same word

As in the design for the study of pronunciation, there are ten subjects in each level of factor A. As he hears the grammatical form, each subject is observed on three criteria as measured on the attitude scales he marks: (1) educated/uneducated, (2) friendly/unfriendly, and (3) professional/unskilled worker.

Correlation of the Scales. Intercorrelations of the three scales show that the educated/uneducated and professional/unskilled worker scales give basically the same information. On the other hand, the lower correlation of the friendly/unfriendly scale with each of the other scales indicates that it provides additional information. Thus, only the data for the educated/uneducated and friendly/unfriendly scales are analyzed in detail for grammar.

Table 63. Intercorrelation of Scales for Grammar.*

	1	2	3
1	1.00	.36	.75
2		1.00	.38
3			1.00

1 = educated/uneducated scale
2 = friendly/unfriendly scale
3 = professional/unskilled worker scale
*These correlations are averages taken across levels of B.

Analysis of Variance. Table 64 is a summary of the analysis of variance for grammatical inflection for data from the educated/uneducated attitude scale. Observed F ratios are significant at the .01 level for the main effects of B and C and for the interactions of AB, BC, and ABC. Table 65, the summary of analysis of variance for grammatical inflection

Table 64. Summary of Analysis of Variance for Grammatical Inflection on the Criterion of Educational Level (Educated/Uneducated Attitude-Scale Measure).

Source of Variation	SS	df	MS	Observed F	Critical F
Between subjects					
A	67.9726	7	9.7104	1.69285	
Subjects w. groups [error (a)]	412.9962	72	5.7361		
Within subjects					
B	222.0452	12	18.5038	15.3050**	**F(.99) = 2.21
AB	305.7087	84	3.6394	3.0102**	**F(.99) = 1.46
B x subj. w. groups [error (b)]	1044.5538	864	1.2090		
C	29.3312	1	29.3312	16.2302**	**F(.99) = 6.99
AC	6.0495	7	.8642	.4782	
C x subj. w. groups [error (c)]	130.1192	72	1.8072		
BC	3230.1875	12	269.1823	145.3939**	**F(.99) = 2.21
ABC	478.1817	84	5.6926	3.0747**	**F(.99) = 1.46
BC x subj. w. groups [error (bc)]	1599.6308	864	1.8514		

Table 65. Summary of Analysis of Variance for Grammatical Inflection on the Criterion of Job Potentiality (Professional/Unskilled Attitude-Scale Measure).

Source of Variation	SS	df	MS	Observed F	Critical F
Between subjects					
A	77.9149	7	11.1307	2.1151	
Subjects w. groups / error (a) /	393.1962	72	5.4624		
Within subjects					
B	172.5894	12	14.3825	13.4102**	**F(.99) = 2.21
AB	265.0413	84	3.1553	2.9447**	**F(.99) = 1.46
B x subj. w. groups / error (b) /	925.7538	864	1.0715		
C	29.3312	1	29.3312	23.9712**	**F(.99) = 6.99
AC	4.6880	7	.6697	.5473	
C x subj. w. groups	88.0962	72	1.2236		
BC	2576.4375	12	214.7031	133.1327**	**F(.99) = 2.21
ABC	419.5933	84	4.9952	3.0974**	**F(.99) = 1.46
BC x subj. w. groups / error (bc) /	1393.3538	864	1.6127		

on data generated by the professional/unskilled worker scale, also shows statistically significant main effects at the .01 level for factors B and C and the interactions of AB, BC, and ABC. In the face of significant interaction effects, an analysis must be made of the simple main effects.

Noun Inflections

Table 66 summarizes the statistical analysis for the subjective responses of the eight socio-economic-cultural groups to the noun plural inflection as in the expression five dollars (c_1) and also to the absence of the noun plural inflection in five dollar (c_2). The F test for the simple main effect of A for level b_1c_1 is not significant. An examination of the means shows a rather uniform approval by all groups of this inflectional form. On the other hand, the F test for the simple main effect of A for level b_1c_2 is statistically significant. An examination of the mean score ratings on the educated/uneducated scale shows all means except the one for the lower-class Anglo-American group giving the

Table 66. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Noun Plural Inflection.

b_1 = noun plural inflection

c_1 = five dollars

c_2 = five dollar

Source of Variation	SS	df	MS	F
A for level b_1c_1	18.79	7	2.68	.94
A for level b_1c_2	29.18	7	4.17	2.45*

*F .95(7,1872) = 2.01

nonstandard form five dollar a low rating. It is interesting to note that the lower-class Black-American group and lower-class Latin-American group appear to recognize the nonstandard form in their subjective responses. This nonstandard feature was observed in the speech of all lower-class ethnic groups in this community. Whether the lower-class Anglo-American group, while rating the nonstandard form higher than other groups, do recognize it as a social marker is examined in Table 67.

Table 67. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Noun Plural Inflection.

$a_{1...8}$ = groups of respondents

b_1 = noun plural inflection

Source of Variation	SS	df	MS	F
C for level a_1b_1	57.80	1	57.80	31.98**
C for level a_2b_1	24.20	1	24.20	13.39**
C for level a_3b_1	7.20	1	7.20	3.98*
C for level a_4b_1	45.00	1	45.00	24.90**
C for level a_5b_1	24.20	1	24.20	13.39**
C for level a_6b_1	84.05	1	84.05	46.51**
C for level a_7b_1	36.45	1	36.45	20.17**
C for level a_8b_1	64.80	1	64.80	35.85**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

F tests at the .01 level of significance on the simple main effects of C at levels of A and B for the noun plural inflection (Table 67) show significant differences for all groups at the .05 or .01 level. Thus, all groups rate the utterance five dollars significantly higher than five dollar on the educated/uneducated scale and recognize the nonstandard form.

Table 68 summarizes the ANOV for the subjective responses of eight socio-economic-cultural groups to the noun genitive inflection as heard in the utterance Smith's car (c_1) and also to the absence of the noun genitive inflection in the utterance Smith car (c_2). The F test for the simple main effect of A for level b_9c_1 is not significant; thus, one may conclude that the noun genitive inflection Smith's car does not evoke measurably different evaluations on the educated/uneducated scale. However, the F test for level b_9c_2 is significant at the .01 level. An examination of the mean ratings on this scale shows both Black-American groups rating the nonstandard form high while upper-class Anglo-Americans, school teachers, and the businessmen as well as the lower-class Latin-Americans rate this form low. Here, then, is an instance of cleavage along racial lines in subjective judgment of a nonstandard form. Whether these two groups react differentially on the educated/uneducated scale to the presentation of the standard and nonstandard forms of the noun

Table 68. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Noun Genitive Inflection.

b_9 = noun genitive inflection

c_1 = Smith's car

c_2 = Smith car

Source of Variation	SS	df	MS	F
A for level b_9c_1	16.15	7	2.31	1.35
A for level b_9c_2	52.15	7	7.45	4.38**

**F .99(7,1872) = 2.64

genitive inflection is examined in the Table 69.

Table 69. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Noun Genitive Inflection.

$a_{1...8}$ = groups of respondents

b_9 = noun genitive inflection

Source of Variation	SS	df	MS	F
C for level a_1b_9	14.20	1	14.20	7.86**
C for level a_2b_9	7.20	1	7.20	3.98*
C for level a_3b_9	31.25	1	31.25	17.29**
C for level a_4b_9	.20	1	.20	.11
C for level a_5b_9	16.20	1	16.20	8.96**
C for level a_6b_9	51.21	1	51.21	28.33**
C for level a_7b_9	36.45	1	36.45	20.17**
C for level a_8b_9	57.80	1	57.80	31.98**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

F tests at the .05 or .01 level of significance on the simple main effects of C at levels of A and B for the noun genitive inflection (Table 69) show significant differences for all groups except the lower-class Black-Americans. Thus, all groups do discriminate on the educated/uneducated scale between the standard and nonstandard forms of the noun genitive inflection except the lower-class Black-Americans. Whether the failure of the lower-class Black-American group to differentiate between these inflectional forms is based, as some linguists suggest,[12] on a substratum of slave-Creole in Negro dialects which indicates genitive relationship, number distinction, and past-tense of verbs by different means than English is beyond the scope of this study. The fact of prime importance here is that this group does not recognize the standard form of the genitive as a social marker.

Pronoun Inflections

Table 70 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the relative pronoun inflection of who in the context "(Who ∿ whom) did you invite to the party?" The F test for the simple main effect of A for level b_7c_1 is significant at the .01 level. An examination of the means shows the lowest rating (1.8) for the use of who in the foregoing construction given by the upper-class Anglo-Americans while the highest mean (5.2) is found in the rating by the businessmen of the community. This trend in means suggests a sharp difference in the subjective judgment of this form by these two segments of the prestigious group in this community.

Table 70. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Inflection of Who.

b_7 = case inflection of pronoun who

c_1 = who

c_2 = whom

Source of Variation	SS	df	MS	F
A for level b_7c_1	64.00	7	9.14	5.37**
A for level b_7c_2	14.59	7	2.08	1.22

**F .99(7,1872) = 2.90

F tests at the .01 level of significance on the simple main effects of C at levels of A and B for the inflection of who in the context

"(Who ∿ whom) did you invite to the party?" (Table 71) show significant differences for all groups except a_2 (upper middle-class Black-Americans) and a_8 (businessmen). The fact that these two prestigious groups do not react differentially to the use of who and whom indicates strong social pressure for the acceptance of who in this construction.

Table 71. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Inflection of Who.

$a_{1...8}$ = groups of respondents

b_7 = case inflection of the pronoun who

Source of Variation	SS	df	MS	F
C for level a_1b_7	61.25	1	61.25	33.89**
C for level a_2b_7	1.80	1	1.80	.99
C for level a_3b_7	8.45	1	8.45	4.68*
C for level a_4b_7	18.05	1	18.05	9.99**
C for level a_5b_7	16.20	1	16.20	8.96**
C for level a_6b_7	9.80	1	9.80	5.42*
C for level a_7b_7	24.20	1	24.20	13.39**
C for level a_8b_7	.20	1	.20	.11

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 72 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the personal pronoun inflection of I in the subjective complement position. The F test for the simple main effect of A at level b_8c_1 is not significant; however, the simple main effect of A at level b_8c_2 is statistically significant. Thus, the groups do not react differentially to the construction "It is I." (c_1);

but the construction "It is me." (c_2) does evoke different responses among the groups. The lowest mean rating (1.6) is given this construction by the upper middle-class Anglo-Americans while the highest mean rating (4.9) is given by the businessmen. This trend in means suggests a rather clear-cut difference in the subjective judgment of this form by two powerful groups in this community and strong social pressure for the acceptance of the use of _me_ in the subjective complement position.

Table 72. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Inflection of _I_.

b_8 = case inflection of pronoun _I_

c_1 = _I_ in subjective complement position

c_2 = _me_ in subjective complement position

Source of Variation	SS	df	MS	F
A for level b_8c_1	2.28	7	.33	.19
A for level b_8c_2	62.00	7	8.86	5.20**

**F .99(7,1872) = 2.64

F tests at the .01 level of significance on the simple main effects of C at levels of A and B for the inflection of _I_ in the subjective complement position (Table 73) show significant differences for all groups except a_8 (businessmen). The fact that group a_8 does not react differentially to the use of "It is (I ∿ me)." indicates that the business community does not find this difference important in speech.

Table 73. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Inflection of I.

$a_{1...8}$ = groups of respondents

c_1 = I in subjective complement position

c_2 = me in subjective complement position

Source of Variation	SS	df	MS	F
C for level a_1b_8	72.20	1	72.20	39.95**
C for level a_2b_8	33.80	1	33.80	18.70**
C for level a_3b_8	18.05	1	18.05	9.99**
C for level a_4b_8	18.05	1	18.05	9.99**
C for level a_5b_8	36.45	1	36.45	20.17**
C for level a_6b_8	24.20	1	24.20	13.39**
C for level a_7b_8	22.05	1	22.05	12.20**
C for level a_8b_8	1.25	1	1.25	.69

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Verb Inflections

Third-Person Singular Inflection

Table 74 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the third-person singular inflection doesn't (c_1) and also to the inflection don't (c_2). Since the F test for the simple main effect of A for level b_5c_1 is not significant, these groups do not differ significantly in their subjective evaluation of doesn't. On the other hand, the F test for A at level b_5c_2 is significant. An examination of the means shows higher ratings for the use of don't by all lower-class ethnic groups and uniformly lower ratings by upper middle-class ethnic groups. The higher subjective evaluation given the variant don't reflects the sharp increase in the use of this form observed among the working class.

Table 74. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Third Person Singular Inflection.

b_5 = third-person singular inflection

c_1 = doesn't

c_2 = don't

Source of Variation	SS	df	MS	F
A for level b_5c_1	8.75	7	1.25	.73
A for level b_5c_2	30.80	7	4.40	2.58*

*F .95(7,1872) = 2.01

F tests at the .05 or .01 level of significance on the simple main effects of C at levels of A and B for the third-person singular inflection of doesn't and don't show statistically significant differences for all groups. Thus, even though lower-class ethnic groups tend to judge the nonstandard form don't higher on the educated/uneducated scale than do upper middle-class groups, these lower-class groups recognize don't as a social marker.

Preterit Inflection

Table 76 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the preterit inflection dove (c_1) and also the preterit dived (c_2). F tests show significant differences at the .01 level for both of these forms among the eight groups. An examination of the mean ratings for the preterit dove shows the

Table 75. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Third-Person Singular Inflection.

$a_{1...8}$ = groups of respondents

b_5 = third-person singular inflection of do not

Source of Variation	SS	df	MS	F
C for level a_1b_5	76.05	1	76.05	42.08**
C for level a_2b_5	39.20	1	39.20	21.69**
C for level a_3b_5	11.25	1	11.25	6.22*
C for level a_4b_5	20.00	1	20.00	11.07**
C for level a_5b_5	45.01	1	45.01	29.90**
C for level a_6b_5	48.05	1	48.05	26.59**
C for level a_7b_5	92.45	1	92.45	51.16**
C for level a_8b_5	61.25	1	61.25	33.89**

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 76. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Preterit Inflection.

b_{11} = preterit verb inflection

c_1 = dove

c_2 = dived

Source of Variation	SS	df	MS	F
A for level $b_{11}c_1$	47.69	7	6.81	4.00**
A for level $b_{11}c_2$	43.49	7	6.21	3.65**

**F .99(7,1872) = 2.64

businessmen giving the highest rating (5.4) and the lower-class Black-Americans giving the lowest (2.8). It appears that the businessmen in this dialect transition area are familiar with the use of both dove and dived and, therefore, show little preference for one usage over another. However, the Negro coming from Southern dialect areas where dived is considered prestigious naturally rates this form above the preterit dove. This interpretation is further strengthened by the fact that the highest mean rating (5.0) for dived (c_2) is also given by the businessmen.

Tolerance for the regional variants dove and dived in this dialect transition area is indicated by the F tests on the simple main effects of C at levels of A and B (Table 77). Statistically significant differences in the subjective evaluation of these preterit verb forms are present only for a_3 (lower-class Anglo-Americans), a_4 (lower-class Black-Americans), and a_7 (English teachers). The absence of significant differences in the subjective evaluation of dove and dived by all other groups indicates that both forms are equally acceptable by most groups in this community. The rejection of the preterit dove by lower-class Black-Americans probably has its origin, as previously explained, in the speech background of this group. It may be that the preference by English teachers for dived is a result of the influence of textbooks out of touch with the realities of usage.

Past-Participle Inflection

Table 78 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the past-participle inflection had drunk (c_1) and also to the past-participle inflection had drank (c_2). F tests show significant differences at the .01 level for both of these

Table 77. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Preterit Inflection.

$a_{1...8}$ = groups of respondents

b_{11} = preterit verb inflection

Source of Variation	SS	df	MS	F
C for level a_1b_{11}	1.25	1	1.25	.69
C for level a_2b_{11}	1.24	1	1.24	.69
C for level a_3b_{11}	9.80	1	9.80	5.42*
C for level a_4b_{11}	8.45	1	8.45	4.68*
C for level a_5b_{11}	.80	1	.80	.44
C for level a_6b_{11}	6.05	1	6.05	3.35
C for level a_7b_{11}	7.21	1	7.21	3.98*
C for level a_8b_{11}	.81	1	.81	.44

*F .95(1,72) = 3.98

Table 78. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Past-Participle Inflection.

b_{12} = past-participle inflection

c_1 = had drunk

c_2 = had drank

Source of Variation	SS	df	MS	F
A for level $b_{12}c_1$	77.79	7	11.11	6.53**
A for level $b_{12}c_2$	64.79	7	9.26	5.44**

**F .99(7,1872) = 2.64

forms among the eight groups. An examination of the mean ratings for had drunk (c_1) shows uniformly high ratings on the educated/uneducated scale by a_1 (upper-class Anglo-Americans), a_7 (English teachers), and a_8 (businessmen) while low ratings are given by a_2 (upper-class Black-Americans) and a_4 (lower-class Black-Americans). Thus, there appears to be cleavage along ethnic lines in subjective responses to the form had drunk. For the form had drank (c_2), the lowest mean rating is given by the upper middle-class Anglo-Americans while the highest rating for this form is found in the lower-class Anglo-American group. This favorable subjective response of the lower-class Anglo-Americans is supported by the observed usage. As previously reported, had drank competes strongly with the standard form among the working-class and lower-class groups.

F tests at the .05 or .01 level of significance on the simple main effects of C at levels of A and B for the past-participle form had drunk and had drank (Table 79) show groups a_1, a_3, a_6, a_7, and a_8 reacting differentially to these forms. Thus, had drank is a social marker in this community, but lower-class Black-Americans and lower-class Latin-Americans do not appear to be subjectively aware of this fact.

Be as an Auxiliary

Table 80 summarizes the ANOV for the subjective responses of the eight socio-economic-cultural groups to the utterance have been living (c_1) and the utterance be living (c_2) in the context of a sentence. Since the F test at the .05 level for $b_{13}c_1$ shows no significant differences, one may conclude that the eight groups evaluate the utterance have been living in essentially the same way. However, the F test at the .05 level

Table 79. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Past-Participle Inflection.

$a_{1...8}$ = groups of respondents

b_{12} = past-participle inflection

Source of Variation	SS	df	MS	F
C for level a_1b_{12}	68.45	1	68.45	37.88**
C for level a_2b_{12}	.21	1	.21	.36
C for level a_3b_{12}	9.81	1	9.81	5.42*
C for level a_4b_{12}	.45	1	.45	.25
C for level a_5b_{12}	1.80	1	1.80	1.00
C for level a_6b_{12}	8.45	1	8.45	4.68*
C for level a_7b_{12}	33.80	1	33.80	18.70**
C for level a_8b_{12}	8.45	1	8.45	4.68*

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

Table 80. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Use of Be as an Auxiliary.

b_{13} = use of be as an auxiliary

c_1 = have been living

c_2 = be living

Source of Variation	SS	df	MS	F
A for level $b_{13}c_1$	22.29	1	3.18	1.87
A for level $b_{13}c_2$	28.35	1	4.05	2.38*

*F .95(7,1872) = 2.01

for $b_{13}c_2$ is significant. An examination of the mean ratings on the educated/uneducated scale shows the lower-class groups rather uniformly rating the nonstandard form be living higher than do the upper-middle class groups.

F tests at the .01 level of significance on the simple main effects of C at levels of A and B on the educated/uneducated scale for the utterance have been living (c_1) and the utterance be living (c_2) are significant for all groups. All groups rate be living low and all groups recognize this form as a social marker.

Table 81. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Use of Be as an Auxiliary.

$a_{1...8}$ = groups of respondents

b_{13} = use of be as an auxiliary

Source of Variation	SS	df	MS	F
C for level a_1b_{13}	101.45	1	101.45	56.14**
C for level a_2b_{13}	45.01	1	45.01	24.90**
C for level a_3b_{13}	48.05	1	48.05	26.59**
C for level a_4b_{13}	28.80	1	28.80	15.94**
C for level a_5b_{13}	31.25	1	31.25	17.29**
C for level a_6b_{13}	80.00	1	80.00	44.27**
C for level a_7b_{13}	92.45	1	92.45	51.17**
C for level a_8b_{13}	61.25	1	61.25	33.89**

**F .99(1,72) = 7.00

The Double Negative

Table 82 summarizes the ANOV for the subjective responses on the educated/uneducated scale of the eight socio-economic-cultural groups to the utterance don't ask anything (c_1) and the utterance don't ask nothing (c_2) in the context of a sentence. The F test at the .05 level of significance shows no statistically significant differences among the groups for their reactions to don't ask anything (c_1). However, the F test is significant for don't ask nothing (c_2). An examination of the mean ratings for the double negative indicates the greatest difference to be between the upper-class Anglo-Americans (rating 1.0) and the upper-class Black-Americans (rating 3.0). Actual observation of the speech of these two groups shows that they are equally careful to avoid the double negative in formal speech; thus it appears that the upper middle-class Black-American group is more tolerant toward the use of the double negative.

Table 82. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for the Double Negative.

b_6 = use of the double negative

c_1 = don't ask anything

c_2 = don't ask nothing

Source of Variation	SS	df	MS	F
A for level b_6c_1	17.60	7	2.51	1.48
A for level b_6c_2	40.55	7	5.79	3.40**

**F .99(7,1872) = 2.64

F tests at the .01 level of significance on the simple main effects of C at levels of A and B on the educated/uneducated scale for the utterance don't ask anything (c_1) and the utterance don't ask nothing (c_2) show significant differences for all groups. Thus, all groups recognize the use of the double negative as a social marker in this community.

Table 83. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for the Double Negative.

$a_{1...8}$ = groups of respondents

b_6 = use of the double negative

Source of Variation	SS	df	MS	F
C for level a_1b_6	80.01	1	80.01	44.27**
C for level a_2b_6	14.45	1	14.45	7.99**
C for level a_3b_6	18.05	1	18.05	9.99**
C for level a_4b_6	16.20	1	16.20	8.96**
C for level a_5b_6	26.45	1	26.45	14.64**
C for level a_6b_6	18.05	1	18.05	9.99**
C for level a_7b_6	51.20	1	51.20	28.33**
C for level a_8b_6	92.45	1	92.45	51.16**

**F .99(1,72) = 7.00

Analysis of Data for Grammar on the Criterion of Social Distance (Friendly/Unfriendly Attitude Scale)

Analysis of Variance. Table 84 is a summary of the analysis of variance for grammar on the data from the friendly/unfriendly attitude scale. Observed F ratios are significant at the .05 level for the main effects of A and at the .01 level for the main effects of B and the interaction

Table 84. **Summary of Analysis of Variance for Grammatical Inflection on the Criterion of Social Distance (Friendly/Unfriendly Attitude-Scale Measure).**

Source of Variation	SS	df	MS	Observed F	Critical F
Between subjects					
A	211.5611	7	30.2230	2.3718*	*F(.95) = 2.14
Subjects w. groups [error (a)]	917.4731	72	12.7427		
Within subjects					
B	68.8394	12	5.7366	5.9262**	**F(.99) = 2.21
AB	134.2452	84	1.5982	1.6510**	**F(.99) = 1.46
B x subj. w. groups [error (b)]	836.3769	864	.9680		
C	.7312	1	.7312	.7916	
AC	7.5726	7	1.0818	1.1712	
C x subj. w. groups [error (c)]	66.5038	72	.9237		
BC	354.0375	12	29.5031	19.3679**	**F(.99) = 2.21
ABC	288.5087	84	3.4346	2.2547**	**F(.99) = 1.46
BC x subj. w. groups [error (bc)]	1316.1462	864	1.5233		

effects of AB, BC, and ABC. Because significant interaction effects are present, one must examine simple main effects to discover sources of variation.

Only a few statistically significant differences for the simple main effects of A for levels of B and C for grammar on the criterion of social distance were found. Some of the more interesting ones are reported in Table 85.

Table 85 indicates that various types of grammatical inflection as well as the double negative evoke statistically significant subjective responses among the eight socio-economic-cultural groups on the criterion of social distance. The lowest mean ratings on the friendly/unfriendly scale for the third-person singular inflection he don't (b_5c_2), suggesting an unfriendly response, are found among upper middle-class Anglo-Americans (3.0), elementary school teachers (3.3), and high school English teachers (3.8). On the other hand, the highest mean ratings for he don't, indicating a friendly reaction toward the nonstandard form, are found for the upper middle-class Black-Americans (4.9) and the businessmen (4.4).

A striking similarity occurs between the response pattern just described and the response pattern of the various groups to the double negative "...don't ask nothing" (b_6c_2). The lowest mean ratings on the friendly/unfriendly scale for the double negative are those of the upper middle-class Anglo-Americans (3.3), elementary teachers (3.3), and the high school English teachers (3.3); whereas the highest mean ratings are given by the upper middle-class Black-Americans (5.2) and the businessmen (4.7). This difference between means of these groups suggests that the use of the double negative does not evoke an unfriendly feeling among

Table 85. Summary of Analysis of Variance for Simple Main Effects of A at Levels of B and C for Grammar on the Social Distance Criterion.

Source of Variation	SS	df	MS	F
A for level b_5c_2 b_5 = third-person singular inflection c_2 = he don't...	28.19	7	4.03	2.40*
A for level b_6c_2 b_6 = double negative c_2 = ...don't ask nothing	40.15	7	5.73	3.42**
A for level b_8c_2 b_8 = inflection of personal pronoun c_2 = It is me.	30.09	7	4.29	2.57*
A for level $b_{12}c_2$ b_{12} = past participle inflection c_2 = had drank	61.40	7	8.77	5.24**
A for level $b_{13}c_2$ b_{13} = be as an auxiliary c_2 = We be living here...	55.35	7	7.91	4.72**

*F .95(7,1872) = 2.01
**F .99(7,1872) = 2.64

the Black-Americans and businessmen, but does elicit an unfriendly feeling by the upper middle-class Anglo-Americans and teachers.

An interesting change in the pattern of responses occurs among the various groups to the use of the objective form of the pronoun I in the subjective complement position, "It is me" (b_8c_2). The upper middle-class Anglo-American group's mean rating of the stereotype form "It is I" is much higher (5.6) than the rating (3.2) given by this group to "It is me." By contrast, the high school English teachers give a much higher mean rating (5.0) to "It is me" as do the businessmen (5.3). In this instance, the responses of the English teachers reflect an awareness of usage realities. In the analysis of the speech of fifteen upper-class informants in this community (Chapter IV), there were nine occurrences of me and six of I in the subjective complement position.

Again, in the pattern of responses among the various groups on the friendly/unfriendly scale, there is an element of similarity between the previously examined data and the responses to the past-participle inflection had drank ($b_{12}c_2$). The lowest mean rating given had drank is 2.2 by the upper middle-class Anglo-Americans; the highest mean rating is 5.1 by the upper middle-class Black-Americans. When one keeps in mind that had drunk predominates in all upper middle-class ethnic groups in this community, the subjective feelings of the upper middle-class Black-Americans indicate an unusually charitable attitude toward deviant usage as contrasted to the attitudes of other groups.

The unorthodox use of the verb be in the context "I be living here..." ($b_{13}c_2$) evokes considerable empathy from the upper middle-class Black-Americans as expressed in the mean rating by this group of 5.0 on the friendly/unfriendly scale. But the lowest mean rating of this unorthodox form of be is found among the upper middle-class Anglo-Americans (2.5) and high school English teachers (3.3).

Table 86 is an ANOV for simple main effects of C at levels of A and B for grammar on the friendly/unfriendly scale. Again, only a few statistically significant differences on the social distance criterion were found. A representative sampling of these is presented in Table 86.

In this instance, the difference of reaction within a group to two inflectional variants on the friendly/unfriendly scale is being tested for statistical significance. Generally, the most clear-cut reactions to inflectional variants are found in the upper middle-class Anglo-American group and the school-teacher groups. For example, the only statistically significant differentiations on the social distance scale to the noun plural inflection five dollars (C a_1b_1) and to the contrasting form five dollar are found in upper middle-class Anglo-American and high school English teacher groups. The mean rating by the upper middle-class Anglo-Americans of 5.5 for the noun plural inflection in five dollars contrasts with a mean rating of 3.1 for the form five dollar. Likewise, the high school English teachers show a similar statistically significant discrimination between these forms on the friendly/unfriendly scale. A similar pattern is also shown in the response of the upper middle-class Anglo-Americans to the third-person singular he doesn't (C a_1b_5) and the contrasting form he don't, the mean rating being 5.4 for the standard form and 3.0 for the deviant expression. The upper middle-class Anglo-Americans also differentiate clearly between "It is I" (5.6) and "It is me" (3.2) on the social distance measure. Elementary school teachers also react differentially to these personal pronoun inflections, giving a mean rating of 5.5 for "It is I" and 4.6 for "It is me."

Table 86. Summary of Analysis of Variance for Simple Main Effects of C at Levels of A and B for Grammar on the Social Distance Criterion.

Source of Variation	SS	df	MS	F
C for level a_1b_1 a_1 = upper middle-class Anglo-American respondents b_1 = noun plural inflection	28.80	1	28.80	31.18**
C for level a_7b_1 a_7 = English teacher respondents b_1 = noun plural inflection	5.00	1	5.00	5.41*
C for level a_1b_5 a_1 = upper middle-class Anglo-American respondents b_5 = third-person singular inflection	28.80	1	28.80	31.18**
C for level a_1b_8 a_1 = upper middle-class Anglo-American respondents b_8 = inflection of personal pronoun in subjective complement position	28.80	1	28.80	31.18**
C for level a_6b_8 a_6 = elementary school teacher respondents b_8 = inflection of personal pronoun in subjective complement position	4.05	1	4.05	4.38*

*F .95(1,72) = 3.98
**F .99(1,72) = 7.00

These statistically significant differences of subjective responses on a measure relating to social acceptability point up the prime importance of grammatical inflection as a social marker in American English. The greater tolerance found in personnel managers and businessmen toward inflectional variants than in the upper-class Anglo-American group suggests that the social mobility of disadvantaged persons will be affected more than the economic opportunities by their use of nonstandard inflectional forms.

Summary

Paralinguistic and Phonological Features Affecting Ethnic Identification

Paralinguistic Phenomena. Complex paralinguistic phenomena (significant nonlinguistic noises made with the vocal tract), even in the use of single words, appear to influence decisions regarding ethnic identity of speakers. Speaker LA_1 (a middle-class Latin-American) was usually identified as a Latin-American when he gave the standard English pronunciations. Likewise, speakers BA_2 and BA_3 (lower-class Black-Americans) were consistently classified as Negroes.

Phonological Phenomena. Even though paralinguistic features in single words appear to influence decisions regarding ethnic identity, certain phonological features seem to be more powerful in evoking subjective judgments of ethnic identity. For example, when LA_1 gave the standard pronunciation for chimney [tʃImni], fifty-four per cent of the respondents classified him as a Latin-American; but when he gave the nonstandard pronounciation [tʃImli], sixty-eight per cent of the listeners classified him as a Black-American. Furthermore, BA_1 (an upper middle-class Black-American) is consistently identified as an Anglo-American when he gives standard pronunciations. Ninety-four per cent of the respondents identify BA_1 as Anglo-American for the standard pronunciation of *four* [for] while ninety-six per cent of the listeners classify BA_3 as Black-American for the nonstandard pronunciation [fo]. A similar discrimination is made for the standard and nonstandard pronunciation of *police*. Eighty-four per cent of the respondents judged BA_1's pronunciation [,po'lis] to be Anglo-American; eighty-three per cent of the listeners identified BA_2's pronunciation / 'po,lis / to be Black-American. This evidence suggests that certain contrasting phonological features (constricted / r / ∿ loss of / r /; stress on second syllable of *police* ∿ stress on first syllable) are more potent than paralinguistic features in single words in evoking subjective judgments of ethnic identity in this community.

Phonological and Inflectional Features Affecting Judgments on the Educational and Job Potentiality Criteria

Underlying Value Structure for Standard Usage. Generalizations made here are based upon the analysis of data for the educated/uneducated scale but are also applicable to the job potentiality criterion because of the high correlation between these two scales. The overall pattern of subjective responses indicates an awareness by all socio-economic-cultural groups that standard phonological and inflectional forms are valued more highly than nonstandard forms as related to educational level and job potentiality. However, Latin-Americans, just out of the migrant stream, are least sensitive or most unaware of the value of standard forms. For example, this group does not seem to be aware that / ʃ / in *chair* and the loss of the constricted / r / in *four* are social markers. On the other hand, the lower-class Black-Americans appear to be more sensitive to and aware of standard forms. For example, this group is keenly aware of the pronunciation [fo] for *four* and [nʌtIŋ] for *nothing* as social markers. Further, evidence shows that upper middle-class Anglo-Americans and school teachers tend to preserve language stereotypes not sanctioned by other prestigious groups in the community. The subjective responses of these two groups to the use of *who* in the construction "(Who ∿ whom) did you invite to the party?" indicates strong approval of *whom* and disapproval of *who*; whereas businessmen and upper-class Black-Americans accept either form, but show some preference for *who* in this position.

Tolerance for Regionally Distributed Standard Forms in a Dialect Transition Area. There is conflicting evidence regarding the development of tolerance toward variant standard forms in a dialect transition area. Even so, the trend seems toward the acceptance of competing forms. All groups, except the lower-class Black-Americans and high school English teachers, react favorably to either *dove*, the Inland North form, or *dived*, the South Midland form. But the subjective responses to the / z / (South Midland) and / s / (Inland North) in *greasy* show less tolerance for the competing pronunciations; prestigious groups generally reject the South Midland pronunciation.

Phonological and Inflectional Features Affecting Judgments on the Social Distance Criterion

Negative Responses on the Social Distance Criterion. On the social distance measure (friendly/unfriendly attitude scale), the upper middle-class Anglo-Americans, elementary teachers, and high school English teachers generally respond in a more negative way toward nonstandard or divided usage items of pronunciation and grammar than do the upper middle-class Black-Americans, businessmen, and the lower-class Latin-American, Anglo-American, and Black-American groups. This pattern of response characterizes the reaction of these groups, for example, toward the third-person singular inflection he don't and the double negative.

Positive Responses on the Social Distance Criterion. Lower-class Black-Americans, Anglo-Americans, and Latin-Americans, generally react favorably toward the standard forms on the social distance scale, even though they have not mastered these forms in their speech. Especially interesting is the subjective responses of the upper middle-class Black-American group to nonstandard pronunciations and inflections. Even though this group is fluent in the use of standard forms, they are more charitable toward nonstandard usage than are their counterpart Anglo-Americans. The use of the double negative, the third-person singular he don't, and the unorthodox use of the verb be do not evoke unfriendly feelings by the Black-American group.

Phonological and Inflectional Variants as Social Markers

Phonological Variants. The following types of phonological variants were found to be social markers in this community:

1. Major phonetic variation. Marked phonetic deviations from standard pronunciations function as social markers. One sample from this population of phonological variants is variant pronunciations of the word five. Statistically significant differences in subjective responses were found between the standard form [fɑɨv] and the variant form having the "slow" diphthong [fa·^{ɨ}v].
2. Incidental phonemic variation. Statistically significant differences were found in subjective responses on the educated/uneducated scale to the substitution of / l / for / n / in chimney and the / z / for / s / in greasy. Thus, the phonological population of incidental phonemic variation represents a source of social markers.
3. Systematic phonemic variation. Statistically significant differences were found in subjective responses on the educated/uneducated scale to systematic phonemic variations. These are variations which occur regularly in many words. They include the following kinds of variation: / d / for / ð / in this, / s / for / z / in hers, / t / for / θ / in nothing, / f / for / θ / in tooth. Therefore, the phonological population of systematic phonemic variations represents a source of social markers.
4. Suprasegmental variation. This type of phonological variation results from a change in the normal stress pattern of a word. Statistically significant differences were found in subjective responses on the educated/uneducated scale to the pronunciation of police with the stress on the first syllable ['po,lis]

and to the pronunciation of the word with stress on the second syllable [,po'lis]. Thus, the phonological population of suprasegmental variation is a source of social markers.

5. Suprasegmental variation in combination with phonemic variation. Pronunciation differences resulting from a combination of shift of stress and alternation of phonemes such as occur in *umbrella* [əm'brɛlə ∼ 'ɑmbə,ɛlə] produce statistically significant differences in subjective responses on the educated/uneducated scale. This phonological population of phonemic variation is another source, therefore, of social markers.

Inflectional Variants. Statistically significant differences were found in subjective responses on the educated/uneducated scale between the standard and nonstandard forms of the following types of grammatical inflection:

1. Noun plural inflection
2. Noun genitive inflection
3. Pronoun inflection
4. Third-person singular inflection
5. Preterit inflection
6. Past-participle inflection
7. Unorthodox use of verb *be*
8. Adjective inflection for the comparative and superlative degree

End Notes

1. William Labov, *The Social Stratification of English in New York City* (Washington, 1966), p. 450.

2. Vernon S. Larsen and Carolyn H. Larsen, "Reactions to Pronunciations," *Communication Barriers for the Culturally Deprived*, edited by Raven I. McDavid, Jr. and William M. Austin (University of Chicago, 1966), pp. 1-9.

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4. William Labov, "Stages in the Acquisition of Standard English," *Social Dialects and Language Learning*, edited by Roger Shuy (Champaign, 1965), p. 101.

5. *Ibid.*, p. 102.

6. Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, *The Measurement of Meaning* (Urbana, 1957), pp. 80-83.

7. N. M. Downie, *Basic Statistical Methods* (New York, 1965), p. 160.

8. Larsen and Larsen, *op. cit.*, p. 7.

9. William M. Austin, "Some Social Aspects of Paralanguage," *Communication Barriers for the Culturally Deprived*, edited by Raven I. McDavid, Jr. and William M. Austin (University of Chicago, 1966), pp. 1-8.

10. B. J. Winer, *Statistical Principles in Experimental Design* (New York, 1962), pp. 236-238.

11. *Ibid.*, pp. 236-238.

12. Beryl Loftman Bailey, "Some Aspects of the Impact of Linguistics on Language Teaching in Disadvantaged Communities," *On the Dialects of Children* (Champaign, 1968), pp. 15-24.

CHAPTER VI

IMPLICATIONS FOR TEACHING THE ENGLISH LANGUAGE ARTS AND SKILLS

This study shows, then, that certain urban groups--however classified on socio-economic, ethnic, and subcultural lines--seem to cluster in dialectal patterns, especially in pronunciation and grammatical inflection, while nevertheless differing significantly in certain other features. Because phonological and inflectional variants evoke in listeners almost automatic impressions of the speaker's educational level, job potentiality, and social acceptability, individuals who have not mastered certain standard pronunciations and grammatical conventions may remain seriously handicapped in their chances for socio-economic advancement.

To enhance the life possibilities of minority groups who speak a non-prestigious dialect, several educational strategies are commonly advocated: (a) educate the general public to respect and appreciate the dialects of minority groups; (b) train speakers of non-prestigious dialects to acquire as a second dialect the standard dialect of the community while retaining their original dialects; (c) attempt to extinguish the original dialect with the standard dialect. The practical-minded educator will not dismiss, as an objective in speaking-skills, mastery of the standard dialect while he wages a campaign to enlighten the general public about the validity of all American English dialects. It is equally unlikely that the idealistic-minded educator could be satisfied with rigorously training his students in the use of the standard dialect while dismissing the task of cultivating respect and admiration for the dialects of minority groups in his community. In fact, "to be tolerant toward--at times even to cherish--pronunciations and dialects different from one's own" is one of the representative objectives that leading English teachers posit, as reported by Lazarus and Knudson.[1] Scholarly research in the field of usage provides guiding principles for dealing with both problems.

1. Inferences concerning the social and cultural significance of dialect differences should be based on careful observation of actual usage, as Raven McDavid has observed.

> It is easier to understand differences when they are specified, and it is easier to do something about them. Once we know how two or more varieties of the language differ in a given community, it should be easier to work out devices for ascertaining what speech features of the underprivileged group actually create the greatest interference with their social acceptance in the dominant culture. Once this is achieved, we may focus on those details; too much of our teaching of "correct usage" is *ad hoc*, based on tradition and personal bias, not on what the facts of the case happen to be.[2]

If educators are to participate effectively in dialect engineering, they must first listen to the dialects they would teach others to respect. They must also learn to discriminate specific features of the standard dialect of the community and the dialects of culturally different groups. Teachers should maintain wide-ranging contacts with various social and economic groups so that they can continuously refine their sensitivity to actual usage in the speech community.

2. Sensitivity to stylistic variations of speech reflecting time, place, speaker, and audience frees the teacher of the sterile right-wrong dichotomy and should enable him to teach students to make judgments of

language usage on the basis of appropriateness. Although confirmed by twentieth-century scholars, especially Sterling Leonard (Current English Usage, 1932), Albert Marckwardt and Fred Walcott (Facts About English Usage, 1938), Charles Fries (American English Grammar, 1940), Robert Pooley (Teaching English Usage, 1945), and Margaret Bryant (Current American Usage, 1962), the principle of appropriateness of usage was recognized by the ancient classicists. Aristotle, for example, observes

> ...the two chief excellences of style are (1) clearness and (2) propriety.

In contemporary vein, he suggests

> ...to each class and habit there is an appropriate style. I mean in reference to age--child, man, or old man; to sex--man or woman; to country--Lacedaemonian or Thessalian.[3]

In addition to refining the principle of appropriateness, the foregoing American scholars were among the first to make us aware of the major distinction between grammar (structure of an utterance) and usage (social appropriateness). These scholars also pointed out the principle that rules follow rather than precede or prescribe the grammar of speaking and writing. The multi-dimensional concept of usage, far from condoning the abuse that "anything goes" or its antithesis, the "right versus wrong" mentality, challenges the teacher to develop his own sophistication about language if he is to encourage such sophistication in his students. As Kenyon has shown, speakers functioning on either the standard or non-standard level will usually command a variety of styles within their own cultural level. Functional variety and cultural level, he emphasizes, should be taught as separate dimensions. Discrimination in the use of these terms permits a more accurate, pluralistic description of usage.

The term cultural level properly designates utterances reflecting region, subculture, and most of all, education--educated or "cultivated," half-educated, illiterate; on the other hand, the term functional variety describes an utterance in terms of social function or occasion. Kenyon calls attention to the indiscriminate usage-labels that have confused teachers (to say nothing of student-teachers and students).

> What are frequently grouped together in one class as different levels of language are often in reality false combinations of two distinct and incommensurable categories, namely, cultural levels and functional varieties.
>
> Among cultural levels may be included, on the lower levels, illiterate speech, narrowly local dialect, ungrammatical speech and writing, excessive and unskillful slang, slovenly and careless vocabulary and construction, exceptional pronunciation, and on the higher level, language used generally by the cultivated, clear, grammatical writing, and pronunciations used by the cultivated over wide areas....
>
> Among functional varieties not depending on cultural levels may be mentioned colloquial language...; formal platform or pulpit speech, public reading, public worship; legal, scientific, and other expository writing; prose and poetic belles-letters....[4]

3. Awareness that usage is not fixed but changes and that it is not completely uniform even at the most highly educated levels (as demonstrated frequently in this study) makes untenable any claim to moral sanction for a particular usage. Well-informed persons of every age have been aware of the dynamic nature of usage. For example, Quintilian assures us that "...usage is...the surest pilot in speaking, and we should treat language as currency minted in the public stamp."[5] He further assures us that educated Romans were not agreed in usage practice. The Oxford English Dictionary provides a vast scholarly resource enabling the teacher to demonstrate that usage does change and that "rules of usage" are a travesty on the complexity of the living language. The Oxford English Dictionary (OED) records, for example, that the preterits

dived and dove have long competed as standard forms:

> 1867, Hayes, The Open Polar Sea: "The whole herd...dove down with a tremendous splash"; 1882, New York Herald: "Women dove headlong from the crosstrees into friendly and convenient nets"; 1889, Coming of Friars: "I at once dived into one of the boxes."[6]

Variations have also long prevailed in the past-participle form of the verb drink. For instance, the OED records the following variant forms:

> 1750, Johnson, Rambler No. 49: "He had drank many a flaggon"; 1813, Col. Hawker, Diary: "We having nearly drunk the landlord out of both his English and French wine"; 1884, Tennyson, Becket: "Ye have eaten of my dish and have drunken of my cup for a dozen years."[7]

The verb drown is also shown to have several variants according to the OED:

> 1715, Swift, Past Dial: "In my own Thames may I be drowned"; 1838, Dickens, Nicholas Nickelby: "Just fill that mug up with luke-warm water, William, will you? ...Why the milk will be drownded"; 1894, The Daily News: "Deserted cottages, whose tenants have...been drowned out."[8]

Knowledge of the diversity and change in language usage provides an excellent basis for combatting unreasonable and narrow-minded attitudes toward persons who speak differently.

4. Recognizing that a person's language is an intimate possession, the teacher will use methods which build on the student's dialect rather than attempt to destroy that dialect (e.g., use of pattern drills on features which are systematic and known to be social markers), as A. L. Davis recommends.[9] Given full acceptance of the appropriateness of their dialects for use with their family and friends, adolescents are more willing to learn variations in language for social situations beyond their immediate environment. The basic aim, then, is to make culturally disadvantaged persons bidialectal. Ruth Golden found taped

listening-and-repeating lessons almost twice as effective in changing usage patterns as were lessons in which students only read the same material on usage in worksheets.[10] To change a student's pronunciation pattern requires specialized instruction because students are often less aware of phonological variations than of grammatical inflections and they must be taught new muscular skills. Recent research has shown that children who are exposed to two dialects may develop a certain amount of bidialectal comprehension but do not, except by special help, develop actual skills of speaking the second dialect.[11]

5. While reverence for dialectal differences should be cultivated, a standard English that is recognized beyond regional and national boundaries has much to commend it.[12] With the English-speaking population of more than a billion people forecast by the mid-1970's, a common standard language freed of prejudice and chauvinistic nationalism could contribute much to the promotion of world cooperation and peace. (A project under the direction of A. L. Davis at the Chicago Institute of Technology is devoted to supporting the growth and recognition of a standard international English. His investigation is designed to sample the pronunciation of varieties of standard English in the United States and Canada and, eventually, in all English-speaking countries.)[13]

6. Nor are listening and speaking skills the only ones that teachers and students need to cultivate if they are to build an awareness of dialects. The role of reading is not to be overlooked for its potential contributions here. Aside from considerations of "eye dialect" (for example, Mark Twain's Huck Finn saying, "generaly" for "generally") there are broader features to be considered. For whenever a person in literature speaks, he reveals a multi-layered set of dialectal features and

clues to help readers understand him, as Arnold Lazarus has observed.

> ...Whenever a speaker in literature or life makes an utterance, he always reveals one of the following: his historical era, his geographical stance (country, region, locality), his age (infancy, childhood, adolescence, adulthood, senility), his sex (male, female, effeminate, tomboyish), the age and sex of his audience, the [nature] of his audience (from intimate to public), his formal education (lack of education, half education ...) his socio-economic status (a continuum from slave through various kinds of followers...leaders...power elites), his cultural milieu's values, sports, and pastimes.[14]

An appreciation of dialect differences and an understanding of how language reveals character can indeed be achieved through the study of major works of literature. The effectiveness of this method has been demonstrated in opus-centered units developed by Project English at Purdue University.[15] Skillful writers often make subtle use of dialect to convey meaning in delineating and contrasting characters and creating local color and humorous effects. Among the many works especially appropriate for this kind of study on the secondary level are Shaw's Pygmalion, Faulkner's The Town, Salinger's The Catcher in the Rye, and many of the works of Mark Twain. In studying The Adventures of Huckleberry Finn, for example, students can be asked to find characteristic dialect features--vocabulary, pronunciation (eye dialect), grammatical usage--in each character's speech; to contrast the speech of various characters; to determine the cultural level and functional variety of utterances--i.e., to make inferences about the education, environment, and socio-economic status of the speaker. A study of the language of the Duke and the Dauphin, for example, can provide much linguistically educative fun and profit. In giving instructions to the Dauphin for playing Juliet, the Duke, though comparatively more literate than the Dauphin, reveals certain idiosyncracies:

> You mustn't bellow out Romeo! that way, like a bull--
> you must say it soft, and sick, and languishingly...she [Juliet]
> don't bray like a jackass.[16]

Here the vocabulary, aside from the humor, reveals the Duke's personality. Something of the charlatan and half-educated is revealed in these words, particularly in the incongruity of his vocabulary. The predominance of such words as bellow, bray, bull, and jackass betray a dialect of a rural background, while the word languishingly sounds strangely alien if not pretentious in this context. The study of language within the context of a literary work offers many possibilities for enlarging the students' understanding of cultural levels and functional varieties of language as well as increasing their ability to read imaginative literature with greater depth and heightened enjoyment.

7. Another enjoyable activity in a literature unit is using substitution drills. This technique is fully developed and demonstrated within the context of literary works, such as Rawlings' The Yearling, Twain's Life on the Mississippi, Clark's The Ox-Bow Incident, and Shakespeare's A Midsummer Night's Dream in the Purdue Project English curriculum.[17] Experimental use of these curriculum materials in schools in widely differing cultural and socio-economic neighborhoods has shown that students respond enthusiastically to this type of activity. Students can be asked, for example, to substitute standard English for the idiolect of such a character as Bottom in A Midsummer Night's Dream. The student not only enjoys the humor of the resulting incongruities, but also learns inductively and correctly about cultural levels and functional varieties of usage.

Summary

This study has identified specific social markers of pronunciation and grammatical inflection in the speech of lower-class Anglo-Americans, Black-Americans, and Latin-Americans. Their low socio-economic status seems to be related, in part, to their lack of knowledge and skill in using the standard dialect of the broader community. Because the best hope for helping these groups overcome their language handicap lies in education, the effectiveness of the teacher in developing bidialectal skills and in liberalizing his own attitudes toward language differences is crucial.* Thus, the education of prospective teachers should give greater emphasis to the nature of usage, the study of social dialects, the problems of motivating students to learn a second dialect, and the techniques of developing these bidialectal skills.

End Notes

1. Arnold Lazarus and Rozanne Knudson, *Selected Objectives for the English Language Arts, Grades 7-12* (Boston, 1967), p. 2.
2. Raven I. McDavid, Jr., "The Cultural Matrix of American English," *American Social Dialects* (Champaign, 1965), p. 9.
3. Aristotle, *Rhetoric, Book III* (Cambridge, 1954), p. 379.
4. John S. Kenyon, "Cultural Levels and Functional Varieties of English," *Aspects of American English* (New York, 1963), p. 150.
5. Quintilian, *The Institutio Oratoria* (London, 1959), p. 113.
6. *The Oxford English Dictionary*, Volume III (Oxford, 1933), p. 547.
7. *Ibid.*, p. 695.
8. *Ibid.*, p. 685.

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*See, further, Raven McDavid, *An Examination of the Attitudes of the NCTE Toward Language* (Champaign, Illinois, 1965).

9. A. L. Davis, *American Dialects for English Teachers* (Chicago, 1969), p. 10.

10. Ruth Golden, *Effectiveness of Instructional Tapes for Changing Regional Speech Patterns* (Detroit, 1962), pp. 89-99.

11. Paul D. Weener, "Social Dialect Differences and the Recall of Verbal Messages," *Journal of Educational Psychology*, Volume 60 (June, 1969), pp. 194-199.

12. Hans P. Guth, *English Today and Tomorrow* (Englewood Cliffs, 1964), p. 87.

13. Davis, *op. cit.*, p. 6.

14. Arnold Lazarus, "Language-Learning Objectives," *Word Study*, XL (February, 1965), p. 2.

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16. Mark Twain, *Adventures of Huckleberry Finn*, (New York, 1961), p. 70.

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APPENDIX A

SOCIAL AND ETHNIC DISTRIBUTION OF PHONOLOGICAL FEATURES IN A SAMPLE OF FORT WAYNE (INDIANA) SPEECH

Table A1. Allophones of / i / and Incidence of / s / and / z / in Greasy.

LEGEND

A = [ɪi~ij] in stressed syllables
B = [i~iˑ] in stressed syllables
C = [s] in greasy
D = [z] in greasy

Informants	Phonetic Transcription	A	B		C	D					
Anglo-American											
A1 (20) Y-N	gri˅isᵻ	X			X						
A2 (20) O-N	gri˅isi	X			X						
A3 (26) Y-N	grijzᵻ	X				X					
A4 (34) Y-N	gri˅izɪ˄	X				X					
A5 (40) M-N	gri˅isᵻ	X			X						
A6 (46) M-N	gri˅izɪ˄i	X				X					
A7 (46) O-N	gri˅iˑsᵻ	X			X						
A8 (46) O-N	gri˅isi˅	X			X						
A9 (60) M-N	grɪ˄isi	X			X						
A10 (65) M-N	griˑsᵻ		X		X						
A11 (65) O-N	grɪ˄isɪ˄	X			X						
A12 (71) O-N	grɪizᵻ	X				X					
A13 (71) O-N	grɪ˄izᵻ	X				X					
A14 (75) M-N	griˑsi˅		X		X						
A15 (75) M-N	grɪ˄isɪ˄i	X			X						
A16 (75) M-N	grɪ˄isᵻ	X			X						
A17 (81) O-N	grɪ˄izᵻ	X				X					
A18 (81) O-N	griˑsi˅		X		X						
A19 (86) Y-N	grɪ˄isᵻ	X			X						
A20 (90) O-N	grɪ˄isᵻ	X			x						
	Anglo-American Totals:	17	3		14	6					
Black-American											
B21 (35) Y-N*	griˑsᵻ		X		X						
B22 (40) Y-N	grɪ˄izɪ˄	X				X					
B23 (40) Y-N*	gri˅isᵻ	X			X						
B24 (40) Y-N*	grɪ˄isᵻ	X			X						
B25 (46) M-N*	gri˅isɪi	X			X						
B26 (46) Y-I	gri˅izᵻ	X				X					
B27 (46) Y-I	gri˅iˑzᵻ	X				X					

Table A1. (cont'd.)

LEGEND

A = [ɨɩ~ɩj] in stressed syllables   C = [s] in greasy

B = [ɩ~ɩ·] in stressed syllables   D = [z] in greasy

Informants	Phonetic Transcription	A	B		C	D				
Black-American										
B28 (83) O-N	grɩˇɩzɨ	X				X				
B29 (92) O-N*	grɩˇɩ·zɨ	X				X				
B30 (93) O-N*	grɩˇɩ·sɨ	X			X					
B31 (98) M-N*	grɩˇɩ·sɩˇ	X			X					
B32 (106) Y-I	grɩˇɩ·zɩˇ	X				X				
B33 (112) Y-I	grɩ^ɩsɩˇ	X			X					
B34 (114) Y-I	grɩˇi·zɨ	X				X				
B35 (115) Y-I	grɩˇɩ·zɨ	X				X				
B36 (115) Y-I	grɪˇɩ·zɨ	X				X				
B37 (117) Y-N	grɩˇɩ·sɩ	X			X					
B38 (118) Y-I	grɪ^ɩ·sɪ^	X			X					
B39 (118) Y-I	grɪ^ɩ·zɨ	X				X				
B40 (129) M-I	grɩˇɩ·zɨ	X				X				
	Black-American Totals:	19	1		9	11				
Latin-American										
L41 (69) Y-I	grɩ·sɨ		X		X					
L42 (92) Y-N	grɪ^ɩsɨ	X			X					
L43 (99) Y-I	grɩ·sɩ		X		X					
L44 (101) Y-I	grɩˇ·sɩˇ		X		X					
L45 (101 Y-I	grɩˇ·sɩˇ		X		X					
L46 (105) O-N*	grɩ·sɩˇ		X		X					
L47 (114) Y-I	grɩˇ·sɩˇ		X		X					
L48 (120) Y-I	grɩ·sɩ		X		X					
L49 (126) Y-I	grɩ·sɩ		X		X					
L50 (128) O-N*	grɩˇ·sɩˇ		X		X					
	Latin-American Totals:	1	9		10					
	Base Sample Totals:	36	14		33	17				

Table A2. Allophones of / I / and Incidence of / hw / and / w / in whip.

LEGEND

A = [hw]
B = [w]
C = [ɪ~ɨ]
D = [ɪᵊ~ɨᵊ]
E = [i~iˑ]

Informants	Phonetic Transcription	A	B		C	D	E
Anglo-American							
A1 (20) Y-N	hwĭp	X			X		
A2 (20) O-N	hwɪ˃p	X			X		
A3 (26) Y-N	hwĭ˃p	X			X		
A4 (34) Y-N	hwɪ˃ᵊp‘	X				X	
A5 (40) M-N	hwɪ˃p	X			X		
A6 (46) M-N	hwɨ˂p	X			X		
A7 (46) O-N	hwɪˑp	X			X		
A8 (46) O-N	hwɪ˃p	X			X		
A9 (60) M-N	hwɪ˃p	X			X		
A10 (65) M-N	hwɪ˃p	X			X		
A11 (65) O-N	hwɨ˂p	X			X		
A12 (71) O-N	hwɪᵊp‘	X				X	
A13 (71) O-N	hwɪ˃ᵊp	X				X	
A14 (75) M-N	wɪ˄p		X		X		
A15 (75) M-N	hwɪ˃p	X			X		
A16 (75) M-N	hwɪp	X			X		
A17 (81) O-N	hwɪ˃ᵊp	X				X	
A18 (81) O-N	hwɪˇp	X			X		
A19 (86) Y-N	wɪ˃p		X			X	
A20 (90) O-N	hwɪ˃p	X			X		
	Anglo-American Totals:	18	2		15	5	
Black-American							
B21 (35) Y-N*	hwɪ˃p	X			X		
B22 (40) Y-N	wɪ˃p		X		X		
B23 (40) Y-N*	hwɪ˃p	X			X		
B24 (40) Y-N*	ʰwɪ˄p‘	X			X		
B25 (46) M-N*	hwɪ˃ᵊp	X				X	
B26 (46) M-N*	hwɪ˃ᵊp	X				X	
B27 (46) Y-I	hwɪ˃ᵊp	X				X	

Table A2. (cont'd.)

LEGEND

A = [hw] C = [ɪ~ɨ] E = [i~iˑ]

B = [w] D = [ɪᵊ~ɨᵊ]

Informants	Phonetic Transcription	A	B		C	D	E				
Black-American											
B28 (83) O-N	hwɪ˃ᵊp	X				X					
B29 (92) O-N*	hwɪ˃p	X			X						
B30 (93) O-N*	hwɪ˃p	X			X						
B31 (98) M-N*	hwɨ˂p	X			X						
B32 (106) Y-I	hwɪᵊp	X				X					
B33 (112) Y-I	hwɪ˃ᵊp	X				X					
B34 (114) Y-I	hwɪ˃ᵊpʻ	X				X					
B35 (115) Y-I	ʰwɪ˄ᵊp	X				X					
B36 (115) Y-I	hwɪ˃p	X			X						
B37 (117) Y-N	hwɪ̆˃p	X			X						
B38 (118) Y-I	hwɪ˃ᵊp	X				X					
B39 (118) Y-I	ʰwɪ˃p	X			X						
B40 (129) M-I	hwɪ˄ᵊpʻ	X				X					
	Black-American Totals:	19	1		10	10					
Latin-American											
L41 (69) Y-I	hwɪ˄p	X			X						
L42 (92) Y-N	hwɪ˄p	X			X						
L43 (99) Y-I	hwiˑpʿ	X					X				
L44 (101) Y-I	hwɪ˄p	X			X						
L45 (101) Y-I	ʰwi˅p	X			X						
L46 (105) O-N*	hwi˅pʿ	X					X				
L47 (114) Y-I	hwi˅p	X			X						
L48 (120) Y-I	hwi˅p	x					X				
L49 (126) Y-I	ʰwi˅pʿ	X					X				
L50 (128) O-N*	hwɪ˄pʿ	X			X						
	Latin-American Totals:	10	0		6		4				
	Base Sample Totals:	47	3		31	15	4				

Table A3. Allophones of / ɛ / and Incidence / s / and / z / in eggs.

LEGEND

A = /ɛ/ = [ɛ~ɛ^] D = /s/ = [s] F = /z/ = [ẓ]

B = /ɛ/ = [ɛᵊ] E = /s/ = [s̬] G = /z/ = [z]

C = /ɛ/ = [ɛᵻ~ɛɨ~eᵻ~eɨ]

Informants	Phonetic Transcription	A	B	C		D	E	F	G		
Anglo-American											
A1 (20) Y-N	ɛ^gz	X							X		
A2 (20) O-N	ɛ^gz	X							X		
A3 (26) Y-N	ɛ^ᵊgz		X						X		
A4 (34) Y-N	ɛ^·gz	X							X		
A5 (40) M-N	ɛ^gz	X							X		
A6 (46) M-N	ɛ^·gz	X							X		
A7 (46) O-N	ɛ^·gz	X							X		
A8 (46) O-N	ɛ^·gz	X							X		
A9 (60) M-N	e·ᵻgz			X					X		
A10 (65) M-N	ɛgz	X							X		
A11 (65) O-N	ɛ^ᵊz		X						X		
A12 (71) O-N	eɨgz			X					X		
A13 (71) O-N	eɪgz			X					X		
A14 (75) M-N	ɛ·gz̥	X						X			
A15 (75) M-N	ɛ^gz	X							X		
A16 (75) M-N	ɛ·gz	X							X		
A17 (81) O-N	ɛ^·gz	X							X		
A18 (81) O-N	ɛᵊgz		X						X		
A19 (86) Y-N	e·ᵻgz			X					X		
A20 (90) O-N	ɛ^ᵊgz		X						X		
	Anglo-American Totals:	12	4	4				1	19		
Black-American											
B21 (35) Y-N*	ɛɨgz			X					X		
B22 (40) Y-N	ɛ^·gz	X							X		
B23 (40) Y-N*	e·ᵻgz			X					X		
B24 (40) Y-N*	ɛ·ᵻgz			X					X		
B25 (46) M-N*	ɛ^·gz	X							X		
B26 (46) Y-I	ɛ·ᵻgz			X					X		
B27 (46) Y-I	e·ᵻgz̥		X					X			

Table A3. (cont'd.)

LEGEND

A = /ɛ/ = [ɛ~ɛ^] D = /s/ = [s] F = /z/ = [z̥]

B = /ɛ/ = [ɛᵊ] E = /s/ = [s̬] G = /z/ = [z]

C = /ɛ/ = [ɛᶧ~ɛɨ~eᶧ~eɨ]

Informants	Phonetic Transcription	A	B	C		D	E	F	G		
B28 (83) O-N	ɛ^·gz	X							X		
B29 (92) O-N*	ɛ^·gz	X							X		
B30 (93) O-N*	e˅·gz			X					X		
B31 (98) M-N*	ɛ^ᶧgz̥			X				X			
B32 (106) Y-I	e·ᶧgz			X					X		
B33 (112) Y-I	eɨgz			X					X		
B34 (114) Y-I	ɛ^ᵊgz̥		X					X			
B35 (115) Y-I	e·ᶧgz			X					X		
B36 (115) Y-I	e·ᶧgz			X					X		
B37 (117) Y-N	ɛ^ᶧgz			X					X		
B38 (118) Y-I	ɛ^ᶧgz			X					X		
B39 (118) Y-I	ɛ^·ɨgz̥			X				X			
B40 (129) M-I	e·ᶧgz̊			X					X		
	Black-American Totals:	4	1	15				4	16		
Latin-American											
L41 (69) Y-I	ɛ^·ᶧgz̥			X				X			
L42 (92) Y-N	ɛ^·ᶧgz			X					X		
L43 (99) Y-I	e·ᶧgz̥			X				X			
L44 (101) Y-I	ɛ^ᶧgz̥			X				X			
L45 (101) Y-I	e·ɨgs̬			X			X				
L46 (105) O-N*	eᶧgs̬			X			X				
L47 (114) Y-I	e·ᶧgs			X		X					
L48 (120) Y-I	eᶧgs			X		X					
L49 (126) Y-I	e·ᶧgz̥			X				X			
L50 (128) O-N*	e·ᶧks̬			X			X				
	Latin-American Totals:	0	0	10		2	3	4	1		
	Base Sample Totals:	16	5	29		2	3	9	36		

Table A4. Allophones of / ɛ / in *chest* and *ten*.

LEGEND

A = /ɛ/ = [ɛ ~ ɛ^] in *chest*
B = /ɛ/ = [ɪ˃] in *chest*
C = /ɛ/ = [ɛᵊ] in *chest*
D = loss of /t/ in *chest*
E = /ɛ/ = [ɛ ~ ɛ^] in *ten*
F = /ɛ/ = [ɪᵛ ~ ɪ^] in *ten*
G = /ɛ/ = [ɛᵊ] in *ten*

Informants	Phonetic Transcription		A	B	C	D		E	F	G		
Anglo-American												
A1 (20) Y-N	tʃɛ^st	tɛ^n	X					X				
A2 (20) O-N	tʃɛ^st	tʻɛ·n	X					X				
A3 (26) Y-N	tʃɛ^st	tʻɛᵊn	X							X		
A4 (34) Y-N	tʃɛ·ᵊst	tʻɪᵛn			X				X			
A5 (40) M-N	tʃɛ̆^st	tɛ˃ᵊn	X							X		
A6 (46) M-N	tʃɛ^ᵊst	tʻɛᵊn			X					X		
A7 (46) O-N	tʃɛ^st	tɛ^n	X					X				
A8 (46) O-N	tʃɛ^ᵊst	tʻɛ^·n			X			X				
A9 (60) M-N	tʃɛ˃st	tɛᵊn	X							X		
A10 (65) M-N	tʃɛ^st	tɛːn	X					X				
A11 (65) O-N	tʃɛst	tʻɛn	X					X				
A12 (71) O-N	tʃɛ^st	tʻɛ^ᵊn										
A13 (71) O-N	tʃɛᵊst	tʻɛ^·ᵊn			X					X		
A14 (75) M-N	tʃɛ·ᵊst	tɛ·ᵊn			X					X		
A15 (75) M-N	tʃɛᵛsᵗ	tʻɛ^n	X			X		X				
A16 (75) M-N	tʃɛ·st	tʻɛ^·n	X					X				
A17 (81) O-N		tʻɛ^n						X				
A18 (81) O-N		tʻɛ^·n						X				
A19 (86) Y-N	tʃɛ^st	tʻɛᵊn	X							X		
A20 (90) O-N	tʃɛs	tɛᵊn	X			X				X		
		Anglo-American Totals:	13	0	5	2		10	1	9		
Black-American												
B21 (35) Y-N*	tʃɛᵊt	tʻɛᵊn			X					X		
B22 (40) Y-N	tʃɛᵊt	tʻɛ^n			X			X				
B23 (40) Y-N*	tʃɛ^st	tɪᵛn	X						X			
B24 (40) Y-N*	tʃɛᵊst	tʻɛᵊn			X					X		
B25 (46) M-N*	tʃɛ^·st	tʻɛ^·n	X					X				
B26 (46) Y-I	tʃɛᵊst	tɛ^n			X			X				
B27 (46) Y-I	tʃɛ^·st	tɪᵛᵊn	X			X			X			

Table A4. (cont'd.)

LEGEND

A = /ɛ/ = [ɛ~ɛ^] in chest
B = /ɛ/ = [ɪ˅] in chest
C = /ɛ/ = [ɛᵊ] in chest
D = loss of /t/ in chest

E = /ɛ/ = [ɛ~ɛ^] in ten
F = /ɛ/ = [ɪ˅~ɪ^] in ten
G = /ɛ/ = [ɛᵊ] in ten

Informants	Phonetic Transcription		A	B	C	D		E	F	G		
Black-American												
B28 (83) O-N	tʃɛ^s	t'ɛ·ᵊn	X			X				X		
B29 (92) O-N*	tʃɛ^st	t'ɛ˃ᵊn	X			X				X		
B30 (93) O-N*	tʃɛ^st	tɛᵊn	X			X				X		
B31 (98) M-N*	tʃɛᵊst	tɛ^ᵊn			X					X		
B32 (106) Y-I	tʃɛᵊsᵗ	tɪ˅ᵊn			X	X			X			
B33 (112) Y-I	tʃɛ^ᵊst	tɛ^ᵊn			X					X		
B34 (114) Y-I	tʃɛᵊs	t'ɪ˅ᵊn			X	X			X			
B35 (115) Y-I	tʃɛ·ᵊs	tɪ˅n			X	X			X			
B36 (115) Y-I	tʃɛ^s	tɪ˅ᵊn	X			X			X			
B37 (117) Y-N	tʃɛ^ᵊst	tɛ^n			X			X				
B38 (118) Y-I	tʃɛ^ᵊs	tɛᵊn			X	X				X		
B39 (118) Y-I	tʃɛ^ᵊs	t'ɛ^ᵊn			X	X				X		
B40 (129) M-I	tʃɛ^ᵊs	tɛ^ᵊn			X	X				X		
	Black-American Totals:		7	0	13	11		4	6	10		
Latin-American												
L41 (69) Y-I	tʃɛ·st'	t'ɛ̆^n	X					X				
L42 (92) Y-N	tʃɛ^st	t'ɛ^ᵊn	X							X		
L43 (99) Y-I	tʃɛ^·st'	t'ɛ^·n	X					X				
L44 (101) Y-I	tʃɛ^st	t'ɛ^n	X					X				
L45 (101) Y-I	tʃɛ^·st	t'ɛ^·n	X					X				
L46 (105) O-N*	ʃɛ^·sᵗ	t'ɛ^n	X			X		X				
L47 (114) Y-I	ʃɪ˅st	t'ɛ^n		X				X				
L48 (120) Y-I	tʃɛ^·st'	t'ɛ^n	X					X				
L49 (126) Y-I	ʃɪ˅·s	t'ɪ˅n		X		X			X			
L50 (128) O-N*	tʃɛ̂st'	t'ɛ̆^n	X			X		X				
	Latin-American Totals:		8	2	0	3		8	1	1		
	Base Sample Totals:		28	2	18	14		22	8	20		

Table A5. Allophones of / ɛ / and Phonemic Incidence before Postvocalic / r / in chair.

LEGEND

A = /ɛ/ = [ɛ ~ ɛ^·]
D = /ɪ/ = [ɪᵛ ~ ɪ^ ~ ɪ˃]
G = /r/ = [ɚ]
B = /æ/ = [æ^]
E = /i/ = [iᵛ ~ i·]
H = /r/ = [ə̣]
C = /e/ = [e· ~ eᵛ·]
F = /ɛ/ = [ɛᵊ]
I = /r/ = [ə̥]

Informants	Phonetic Transcription	A	B	C	D	E	F		G	H	I
Anglo-American											
A1 (20) Y-N	tʃɛ^ɚ	X							X		
A2 (20) O-N	tʃɛɚ	X							X		
A3 (26) Y-N	tʃɛ^ɚ	X							X		
A4 (34) Y-N	tʃɛ^ɚ	X							X		
A5 (40) M-N	tʃɛ̇·ɚ	X							X		
A6 (46) M-N	tʃɛ^ɚ	X							X		
A7 (46) O-N	tʃɛ^ɚ	X							X		
A8 (46) O-N	tʃɛ·ɚ	X							X		
A9 (60) M-N	tʃɛ^·ɚ	X							X		
A10 (65) M-N	tʃɛ^·ɚ	X							X		
A11 (65) O-N	tʃɛ^ᵊɚ						X		X		
A12 (71) O-N	tʃɛ^·ɚ	X							X		
A13 (71) O-N	tʃɛɚ	X							X		
A14 (75) M-N	tʃɛ˃ɚ	X							X		
A15 (75) M-N	tʃɛᵊɚ						X		X		
A16 (75) M-N	tʃɛ˙ɚ	X							X		
A17 (81) O-N	tʃɛ^ɚ	X							X		
A18 (81) O-N	tʃɛ^·ɚ	X							X		
A19 (86) Y-N	tʃɪᵛɚ				X				X		
A20 (90) O-N	tʃɛ^ɚ	X							X		
	Anglo-American Totals:	17	0	0	1	0	2		20	0	0
Black-American											
B21 (35) Y-N*	tʃæ^ɚ		X						X		
B22 (40) Y-N	tʃɛ˃ɚ	X							X		
B23 (40) Y-N*	tʃɪ^·ə̣				X					X	
B24 (40) Y-N*	tʃɪ^ɚ				X				X		
B25 (46) M-N*	tʃɛ^ɚ	X							X		
B26 (46) Y-I	tʃɛ^·ɚ	X							X		
B27 (46) Y-I	tʃiᵛɚ					X			X		

Table A5. (cont'd.)

LEGEND

A = /ɛ/ = [ɛ~ɛ^·]
D = /ɪ/ = [ɪ˅~ɪ^~ɪ·]
G = /r/ = [ɚ]
B = /æ/ = [æ^]
E = /i/ = [i˅~i·]
H = /r/ = [ə̣]
C = /e/ = [e·~e˅·]
F = /ɛ/ = [ɛᵊ]
I = /r/ = [ə̥]

Informants	Phonetic Transcription	A	B	C	D	E	F		G	H	I
Black-American											
B28 (83) O-N	tʃɛ^ɚ	X							X		
B29 (92) O-N*	tʃɛ˅·ɚ	X							X		
B30 (93) O-N*	tʃɛ^ɚ	X							X		
B31 (98) M-N*	tʃɛ^ɚ	X							X		
B32 (106) Y-I	tʃɪ˅·ə̥				X						X
B33 (112) Y-I	tʃɪ˅·ə̣				X					X	
B34 (114) Y-I	tʃɛ^ɚ	X							X		
B35 (115) Y-I	tʃɛ^·ə̣	X								X	
B36 (115) Y-I	tʃɪ˅ə̥				X						X
B37 (117) Y-N	tʃɛ^ə̣	X								X	
B38 (118) Y-I	tʃe·ə̥			X							X
B39 (118) Y-I	tʃe˅·ə̣			X						X	
B40 (129) M-I	tʃi·ə̣					X				X	
	Black-American Totals:	10	1	2	5	2	0		11	6	3
Latin-American											
L41 (69) Y-I	tʃɛ^ɚ	X							X		
L42 (92) Y-N	tʃɛ^ɚ	X							X		
L43 (99) Y-I	tʃɛ^ɚ	X							X		
L44 (101) Y-I	tʃɛ^ɚ	X							X		
L45 (101)Y-I	tʃɛ^ə̣	X								X	
L46 (105) O-N*	tʃɛ^·ɚ	X							X		
L47 (114) Y-I	ʃɛ^ɚ	X							X		
L48 (120) Y-I	tʃɛ^·ɚ	X							X		
L49 (126) Y-I	tʃɛ^ɚ	X							X		
L50 (128) O-N*	tʃɛ^ɚ	X							X		
	Latin-American Totals:	10							9	1	
	Base Sample Totals:	37	1	2	6	2	2		40	7	3

Table A6. Allophones of / e / and Unstressed / ə ~ ɪ / in April.

LEGEND

A = /e/ = [eᵛᵻ ~ eᵻ ~ e·ᵻ ~ e·ᶧ]

B = /e/ = [ɛᵻ ~ ɛ^ᵻ]

C = /e/ = [e ~ e·]

D = /ə/ = [ə ~ ə^]

E = /ɪ/ = [ᵻ ~ ʉ]

F = /r/ = [r̩]

Informants	Phonetic Transcription	A	B	C		D	E	F			
Anglo-American											
A1 (20) Y-N	e·ᵻprə^t	X				X					
A2 (20) O-N	eᵻpr̩t	X						X			
A3 (26) Y-N	e·ᵻprət	X				X					
A4 (34) Y-N	e·ᵻprᵻt	X					X				
A5 (40) M-N	e·ᵻprᵻt	X				X					
A6 (46) M-N	e·ᵻprə^t	X				X					
A7 (46) O-N	e·ᵻprᵻt	X					X				
A8 (46) O-N	e·ᵻprət	X					X				
A9 (60) M-N	eᵻprət	X				X					
A10 (65) M-N	eᵛᵻprᵻt	X					X				
A11 (65) O-N	ɛ^ᵻprə^t		X			X					
A12 (71) O-N	eᵻprə^t	X				X					
A13 (71) O-N	eᵛᵻprət	X				X					
A14 (75) M-N	e·ᶧprə^t	X				X					
A15 (75) M-N	eᵻprᵻt	X					X				
A16 (75) M-N	eᵛᵻpr̩t	X						X			
A17 (81) O-N	ɛ͜ᵻprᵻt		X				X				
A18 (81) O-N	eᵛᵻprət	X				X					
A19 (86) Y-N	e·ᵻprət	X				X					
A20 (90) O-N	e·ᵻprᵻt	X					X				
	Anglo-American Totals:	18	2			11	7	2			
Black-American											
B21 (35) Y-N*	e·ᵻprᵻt	X					X				
B22 (40) Y-N	eᵻprət	X				X					
B23 (40) Y-N*	e·ᶧprət	X				X					
B24 (40) Y-N*	e·ᵻprət	X				X					
B25 (46) M-N*	e·ᶧprᵻt	X					X				
B26 (46) Y-I	eᵻprᵻt	X					X				
B27 (46) Y-I	e·ᵻprᵻt	X					X				

Table A6. (cont'd.)

LEGEND

A = /e/ = [e˅ɪ~eɪ~eˑɪ~eᶦ]
B = /e/ = [ɛɪ~ɛ˄ɪ]
C = /e/ = [e~eˑ]
D = /ə/ = [ə~ə˄]
E = /ɪ/ = [ɪ~ʉ]
F = /r/ = [r̩]

Informants	Phonetic Transcription	A	B	C		D	E	F			
Black-American											
B28 (83) O-N	e˅ɪprɪt	X					X				
B29 (92) O-N*	eˑɪprət	X				X					
B30 (93) O-N*	e˅ɪpr̩t	X						X			
B31 (98) M-N*	eˑɪprɪt	X					X				
B32 (106) Y-I	eˑᶦprɪ̆t	X					X				
B33 (112) Y-I	eɪprɪ̆t	X					X				
B34 (114) Y-I	eɪprɪ˅t	X					X				
B35 (115) Y-I	eˑprɪt			X			X				
B36 (115) Y-I	eˑᶦprɪt	X					X				
B37 (117) Y-N	eˑɪprɪt	X					X				
B38 (118) Y-I	eprᶦt			X			X				
B39 (118) Y-I	eˑɪprᶦt	X					X				
B40 (129) M-I	eɪpʳɪt	X					X				
	Black-American Totals:	18	0	2		4	15	1			
Latin-American											
L41 (69) Y-I	eᶦpr̃ɪt	X					X				
L42 (92) Y-N	e˅ˑɪprɪ˅t	X					X				
L43 (99) Y-I	eɪp̃rɪt	X					X				
L44 (101) Y-I	e˅ˑɪprɪt	X					X				
L45 (101) Y-I	eɪprʉt	X					X				
L46 (105) O-N*	eɪpr̃ɪt	X					X				
L47 (114) Y-I	ĕᶦprᶦt	X					X				
L48 (120) Y-I	e˅ᶦpr̃ɪt	X					X				
L49 (126) Y-I	eɪprɪt	X					X				
L50 (128) O-N*	e˅ɪprɪt	X					X				
	Latin-American Totals:	10					10				
	Base Sample Totals:	46	2	2		15	32	3			

Table A7. Allophones of / æ / and / ɪ ~ ə / and Incidence of / z / and / s / in *ashes*.

LEGEND

A = /æ/ = [æ˅~æ˄] D = /ə/ = [ə~ə˄] F = /s/ = [s~s̬]

B = /æ/ = [æᵋ~æᵊ~æᶦ] E = /ɪ/ = [ᵻ˂~ᵻ] G = /z/ = [z̥~z]

C = /æ/ = [ɛ˅~ɛ˄]

Informants	Phonetic Transcription	A	B	C		D	E		F	G	
Anglo-American											
A1 (20) Y-N	æ˅ʃᵻ˂z	X					X			X	
A2 (20) O-N	æ˄ʃə˄z	X				X				X	
A3 (26) Y-N	æ˄ʃᵻz	X					X			X	
A4 (34) Y-N	æ˄ʃᵻz	X					X			X	
A5 (40) M-N	æ˄ʃᵻ˂z	X					X			X	
A6 (46) .M-N	æ˄ʃə˄z	X				X				X	
A7 (46) O-N	æ˄ʃᵻ˂z	X					X			X	
A8 (46) O-N	æ˅ʃᵻz	X					X			X	
A9 (60) M-N	æ˄ᵋʃᵻ˂z		X				X			X	
A10 (65) M-N											
A11 (65) O-N	æ˄ʃᵻz	X					X			X	
A12 (71) O-N	æ˄ᶦʃəz		X			X				X	
A13 (71) O-N	æᵊʃᵻz		X				X			X	
A14 (75) M-N	æ˄ʃᵻz	X					X			X	
A15 (75) M-N	æ˄ʃəz	X				X				X	
A16 (75) M-N	æᵊʃᵻ˂z		X				X			X	
A17 (81) O-N	æ˄ʃᵻz	X					X			X	
A18 (81) O-N	æᵊʃᵻ˂z		X				X			X	
A19 (86) Y-N	æ·ᵊʃᵻ˂z		X			X				X	
A20 (90) O-N	æ˄ʃə˄z	X				X				X	
	Anglo-American Totals:	13	6			6	13			19	
Black-American											
B21 (35) Y-N*	æ˅ᶦʃᵻ˂z		X				X			X	
B22 (40) Y-N	æ˄ʃᵻz	X					X			X	
B23 (40) Y-N*	æ·ʃᵻ˂z	X					X			X	
B24 (40) Y-N*	æ˄ᶦʃᵻ˂z		X				X			X	
B25 (46) M-N*	æ˅·ʃᵻz	X					X			X	
B26 (46) Y-I	æ˅ᶦʃᵻ̊˂z		X				X			X	
B27 (46) Y-I	æᵋʃᵻ˂z		X				X			X	

Table A7. (cont'd.)

LEGEND

A = /æ/ = [æˇ ~ æˆ] D = /ə/ = [ə ~ əˆ] F = /s/ = [s ~ s̬]

B = /æ/ = [æᵋ ~ æᵊ ~ æᶦ] E /ɪ/ = [ɪ˂ ~ ɪ] G = /z/ = [ẓ ~ z]

C = /æ/ = [ɛˇ ~ ɛˆ]

Informants	Phonetic Transcription	A	B	C		D	E		F	G	
Black-American											
B28 (83) O-N	æˑˇʃɪ˂z	X					X			X	
B29 (92) O-N	æːᵋʃɪ˂z		X				X			X	
B30 (93) O-N*	æˑʃɪz	X					X			X	
B31 (98) M-N*	æˇᶦʃɪ˂z		X				X			X	
B32 (106) Y-I	æˆˑᶦʃɪż		X				X			X	
B33 (112) Y-I	æˑᶦʃɪ˂z		X				X			X	
B34 (114) Y-I	æˑᵋʃɪ̇˂z		X				X			X	
B35 (115) Y-I	æˇᵋʃɪ˂z		X				X			X	
B36 (115) Y-I	æˑᶦʃɪz		X				X			X	
B37 (117) Y-N	æˇˑᶦʃɪ˂z̊		X				X			X	
B38 (118) Y-I	æˆʃɪż	X					X			X	
B39 (118) Y-I	æˑᶦʃɪz		X				X			X	
B40 (120) M-I	æˑᶦʃɪ˂z		X				X			X	
	Black-American Totals:	6	14				20			20	
Latin-American											
L41 (69) Y-I	ɛᶦʃɪs			X			X		X		
L42 (92) Y-N	æˆʃɪ˂s	X					X		X		
L43 (99) Y-I	ɛˆᶦʃɪ˂s			X			X		X		
L44 (101) Y-I	æˆʃɪ˂s	X					X		X		
L45 (101) Y-I	æˆ tʃɪš	X					X		X		
L46 (105) O-N*	ɛˇᶦʃɪ˂š			X			X		X		
L47 (114) Y-I	ɛˇʃɪ˂s			X			X		X		
L48 (120) Y-I	ɛˆʃɪ˂š			X			X		X		
L49 (126) Y-I	ɛˆʃɪs			X			X		X		
L50 (128) O-N*	ɛ̃ˆʃɪš			X			X		X		
	Latin-American Totals:	3		7			10		10		
	Base Sample Totals:	22	20	7		6	33		10	39	

Table A8. Allophones of / ɑ ~ ɒ / and / o / before Intersyllabic / r / in Tomorrow.

LEGEND

A = [a˂ ~ a˃]
B = [ɑ ~ ɒ]
C = [o˅]
D = [ɚ]
E = [ə̣]
F = [ə]

Informants	Phonetic Transcription	A	B	C		D	E	F			
Anglo-American											
A1 (20) Y-N	tʻəma˂·ɚo˂	X				X					
A2 (20) O-N	tʻəma˃·ɚə	X				X					
A3 (26) Y-N	təma˂ɚo˂	X				X					
A4 (34) Y-N	təma˃ɚə	X				X					
A5 (40) M-N	tʻu˅ma˂ɚə	X				X					
A6 (46) M-N	təmɑɚo˂		X			X					
A7 (46) O-N	tə˄ma˃ɚə	X				X					
A8 (46) O-N	tʻəmɑɚə		X			X					
A9 (60) M-N	tə˂maɚə̣	X				X					
A10 (65) M-N	tʻəmaɚə	X				X					
A11 (65) O-N	tʻə˄ma˂ɚə̣	X				X					
A12 (71) O-N	təma˂ɚə	X				X					
A13 (71) O-N	tʻəmɑ·ɚə̣		X			X					
A14 (75) M-N	tʻəma˃ɚə	X				X					
A15 (75) M-N	təma˂ɚə	X				X					
A16 (75) M-N	təma˂ɚo˅	X				X					
A17 (81) O-N	tʻəmo˅ɚə			X		X					
A18 (81) O-N	təmaːɚə	X				X					
A19 (86) Y-N	tʻəmaːɚə˂			X		X					
A20 (90) O-N	tʻəmo˅ɚə	X				X					
	Anglo-American Totals:	15	3	2		20					
Black-American											
B21 (35) Y-N*	tʻəma˂ɚo˂˅	X				X					
B22 (40) Y-N	təmaːɚə˃	X				X					
B23 (40) Y-N*	tʻəma˃·ɚə	X				X					
B24 (40) Y-N*	təma·ɚo˂	X				X					
B25 (46) M-N*	təma·ɚo·˅	X				X					
B26 (46) Y-I	tʻu˅·maːɚə˃	X				X					
B27 (46) Y-I	tʻəmɑɚo·ᵘ		X			X					

Table A8. (cont'd.)

LEGEND

A = [a˂ ~ a˃]
B = [ɤ ~ ɒ]
C = [o˅]
D = [ɚ]
E = [ə̣]
F = [ə͓]

Informants	Phonetic Transcription	A	B	C		D	E	F			
Black-American											
B28 (83) O-N	t'əmo˅ɚə̰			X		X					
B29 (92) O-N*	t'əma˂ə̣ɵ˂	X					X				
B30 (93) O-N*	t'əmɤɚə̰		X			X					
B31 (98) M-N*	tu·maə̣ə˄	X					X				
B32 (106) Y-I	t'əma˃·ə̣ᵊ	X					X				
B33 (112) Y-I	t'əma˃·ə͓	X						X			
B34 (114) Y-I	t'u˅·ma˃ə̣ᵊ	X					X				
B35 (115) Y-I	t'əmɤ·ə͓		X					X			
B36 (115) Y-I	t'əma˃·ə̣ə	X					X				
B37 (117) Y-N	t'əma·ə̣ə̆	X					X				
B38 (118) Y-I	t'əmɤə̣ə		X				X				
B39 (118) Y-I	t'əma˂·ə͓	X						X			
B40 (129) M-I	tu˅ma·ə̣ə	X					X				
	Black-American Totals:	15	4	1		9	8	3			
Latin-American											
L41 (69) Y-I	t'əma˄ɚo˅	X				X					
L42 (92) Y-N	t'u˅ma:ɚo˂	X				X					
L43 (99) Y-I	t'a˄ma˃ɚo˅	X				X					
L44 (101) Y-I	t'ə˅ma˄·ə̆	X						X			
L45 (101) Y-I	t'u˅ma˃əŏ˂	X					X				
L46 (105) O-N*	t'a˄ma˃ɚă	X				X					
L47 (114) Y-I	t'əmo˅ɚə˃			X		X					
L48 (120) Y-I	t'u·ma˄ɚo˄	X				X					
L49 (126) Y-I	t'a˄ma˃ɚă	X				X					
L50 (128) O-N*	t'a˄ma:ɚă	X				X					
	Latin-American Totals:	9	1			8	1	1			
	Base Sample Totals:	39	7	4		37	9	4			

Table A9. Allophones of / u / in Tube.

LEGEND

A = /u/ = monophthong [ʉ~u]

B = /u/ = upgliding diphthong [ʊu]

C = /u/ = diphthong with high central beginning [ᵿʉ]

Informants	Phonetic Transcription	A	B	C
Anglo-American				
A1 (20) Y-N	t'u·t	X		
A2 (20) O-N	t'u·b	X		
A3 (26) Y-N	tu˂b	X		
A4 (34) Y-N	tʊ·ub		X	
A5 (40) M-N	t'u·b	X		
A6 (46) M-N	t'ʊub		X	
A7 (46) O-N	t'ub	X		
A8 (46) O-N	t'ʊub		X	
A9 (60) M-N	tu˂·b	X		
A10 (65) M-N	t'ᵿʉb			X
A11 (65) O-N	t'ʊub		X	
A12 (71) O-N	t'u˅b	X		
A13 (71) O-N	t'u·b	X		
A14 (75) M-N	tʊub		X	
A15 (75) M-N	tʊ˄ub		X	
A16 (75) M-N	t'uːb	X		
A17 (81) O-N	tʊub		X	
A18 (81) O-N	t'ʊub		X	
A19 (86) Y-N	t'u·b	X		
A20 (90) O-N	t'ub	X		
	Anglo-American Totals:	11	3	1
Black-American				
B21 (35) Y-N*	t'ʊub		X	
B22 (40) Y-N	t'ub	X		
B23 (40) Y-N*	t'ᵿʉb			X
B24 (40) Y-N*	t'ᵿʉb			X
B25 (46) M-N*	t'ʊub		X	
B26 (46) Y-I	tᵿʉ·b			X
B27 (46) Y-I	tᵿʉ·b			X

Table A9. (cont'd.)

LEGEND

A = /u/ = monophthong [ʉ~u]

B = /u/ = upgliding diphthong [ʊu]

C = /u/ = diphthong with high central beginning [ᵿʉ]

Informants	Phonetic Transcription	A	B	C
Black-American				
B28 (83) O-N	t'uᵛ·b	X		
B29 (92) O-N*	tᵿʉ·b			X
B30 (93) O-N*	tʊu·b		X	
B31 (98) M-N*	t'ʉ·b	X		
B32 (106) Y-I	tjᵿʉb			X
B33 (112) Y-I	tjʉ·b	X		
B34 (114) Y-I	t'jʉb	X		
B35 (115) Y-I	t'jʉ·b	X		
B36 (115) Y-I	tjʉ·b	X		
B37 (117) Y-N	t'u·b	X		
B38 (118) Y-I	tjᵿʉ·b			X
B39 (118) Y-I	t'ᵿʉ·b			X
B40 (129) M-I	tᵿʉ·b			X
	Black-American Totals:	9	3	9
Latin-American				
L41 (69) Y-I	t'ju·b	X		
L42 (92) Y-N	t'u·b	X		
L43 (99) Y-I	t'juᵛ·b	X		
L44 (101) Y-I	t'ᵿʉ·b			X
L45 (101) Y-I	t'ub	X		
L46 (105) O-N*	t'ju·b	X		
L47 (114) Y-I	t'u·p'	X		
L48 (120) Y-I	t'up'	X		
L49 (126) Y-I	t'ju·b	X		
L50 (129) O-N*	t'u·p'	X		
	Latin-American Totals:	9	0	1
	Base Sample Totals:	29	11	10

Table A10. Allophones of / ʊ / in Push.

LEGEND

A = /ʊ/ = [ʊ˅ ~ ʊ˂ ~ ʊ˄]

B = /ʊ/ = [ʊᵊ]

C = /ʊ/ = [ʊᶦ]

D = /ʊ/ = [ʊᵘ]

E = /ʊ/ = [u]

F = /ʊ/ = [ᵾᵊ]

Informants	Phonetic Transcription	A	B	C	D	E	F
Anglo-Americans							
A1 (20) Y-N	pʻʊᵊʃ		X				
A2 (20) O-N	pʊ˄ʃ	X					
A3 (26) Y-N	pʻʊᵊʃ		X				
A4 (34) M-N	pʻʊ˅ʃ	X					
A5 (40) M-N	pʻʊ˄ʃ	X					
A6 (46) M-N	pʊ˄ʃ	X					
A7 (46) O-N	pʻʊ˄ʃ	X					
A8 (46) O-N	pʊᵊʃ		X				
A9 (60) M-N	pʻʊᶦʃ			X			
A10 (65) M-N	pʻʊʃ	X					
A11 (65) O-N	pʻʊʃ	X					
A12 (71) O-N	pʊᵊʃ		X				
A13 (71) O-N	pu˅ʃ					X	
A14 (75) M-N	pʻʊ˄ᵊʃ		X				
A15 (75) M-N	pʊᵘʃ				X		
A16 (75) M-N	pʻʊ˂ʃ	X					
A17 (81) O-N	pᵾᵊʃ						X
A18 (81) O-N	pʊ˄ʃ	X					
A19 (86) Y-N	pʻʊᶦʃ			X			
A20 (90) O-N	pʊᵊʃ		X				
	Anglo-American Totals:	9	6	2	1	1	1
Black-American							
B21 (35) Y-N*	pʊ·ʃ	X					
B22 (40) Y-N	pʻʊ˂ʃ	X					
B23 (40) Y-N*	pʊ·ᵊʃ		X				
B24 (40) Y-N*	pʻʊ˄ᵊʃ		X				
B25 (46) M-N*	pʻʊᵊʃ		X				
B26 (46) Y-I	pʻʊ˂ᵊʃ		X				
B27 (46) Y-I	pʻʊ˂ᵊʃ		X				

Table A10. (cont'd.)

LEGEND

A = /ʊ/ = [ʊ˅ ~ ʊ˂ ~ ʊ˄]
B = /ʊ/ = [ʊᵊ]
C = /ʊ/ = [ʊᶤ]
D = /ʊ/ = [ʊᵘ]
E = /ʊ/ = [u]
F = /ʊ/ = [ᵿᵊ]

Informants	Phonetic Transcription	A	B	C	D	E	F				
Black-Americans											
B28 (83) O-N	pʻʊ˄ʃ	X									
B29 (92) O-N*	pʻʊˑᶤʃ			X							
B30 (93) O-N*	pʻu˅ˑʃ	X									
B31 (98) M-N*	pʻʊ˂ᵊʃ		X								
B32 (106) Y-I	pʻʊ˂ᵊʃ		X								
B33 (112) Y-I	pʻʊ˄ᵊʃ		X								
B34 (114) Y-I	pʻʊ˂ʃ	X									
B35 (115) Y-I	pʻᵿᵊʃ						X				
B36 (115) Y-I	pʻʊ˄ᵊʃ		X								
B37 (117) Y-N	pʻʊ˄ᶤʃ			X							
B38 (118) Y-I	pʻʊ˂ˑʃ	X									
B39 (118) Y-I	pʻᵿᵊʃ						X				
B40 (129) M-I	pʻʊ˂ᵊʃ		X								
	Black-American Totals:	6	10	2	0	0	2				
Latin American											
L41 (69) Y-I	pʻʊ˄ʃ	X									
L42 (92) Y-N	pʻʊ˄ʃ	X									
L43 (99) Y-I	pʻuʃ					X					
L44 (101) Y-I	pʻʊ˄ʃ	X									
L45 (101) Y-I	pʻʊ˄ʃ	X									
L46 (105) O-N*	pʻʊ˄ˑʃ	X									
L47 (114) Y-I	pʻuᵘʃ					X					
L48 (120) Y-I	pʻu˅ˑʃ					X					
L49 (126) Y-I	pʻuˑʃ					X					
L50 (128) O-N*	pʻuːʃ					X					
	Latin-American Totals:	5	0	0	0	5	0				
	Base Sample Totals:	20	16	4	1	6	3				

Table 11. Allophones of / ʊ / in Pull.

LEGEND

A = /ʊ/ = [ʊ˅ ~ ʊ˂ ~ ʊ˄]

B = /ʊ/ = [ʊᵊ]

C = /ʊ/ = [ʊᵘ]

D = /ʊ/ = [ᵾ]

E = /ʊ/ = [u]

Informants	Phonetic Transcription	A	B	C	D	E
Anglo-American						
A1 (20) Y-N	p'ʊ˄ᵊɫ		X			
A2 (20) O-N	pʊ˄ɫ	X				
A3 (26) Y-N	p'ʊ˅ɫ	X				
A4 (34) Y-N	p'ʊ˅ᵊɫ		X			
A5 (40) M-N	p'ʊ˄ɫ	X				
A6 (46) M-N	pʊˑɫ	X				
A7 (46) O-N	p'ʊ˄ɫ	X				
A8 (46) O-N	pʊ˅ɫ	X				
A9 (60) M-N	p'ʊᵘɫ			X		
A10 (65) M-N	p'ʊ˄ɫ	X				
A11 (65) O-N	p'ʊ˅ɫ	X				
A12 (71) O-N	pʊᵊɫ		X			
A13 (71) O-N	puɫ					X
A14 (75) M-N	p'ʊ˄ɫ	X				
A15 (75) M-N	pʊ˄ɫ	X				
A16 (75) M-N	p'ʊɫ	X				
A17 (81) O-N	pʊ˂ɫ	X				
A18 (81) O-N	pʊˑɫ	X				
A19 (86) Y-N	p'ʊ˅ɫ	X				
A20 (90) O-N	pʊ˅ɫ	X				
	Anglo-American Totals:	15	3	1	0	1
Black-American						
B21 (35) Y-N*	pʊˑɫ	X				
B22 (40) Y-N	pʊ˂ɫ	X				
B23 (40) Y-N*	pʊᵊɫ		X			
B24 (40) Y-N*	p'ʊᵊɫ		X			
B25 (46) M-N*	p'ʊ˄ɫ	X				
B26 (46) Y-I	p'ʊ˄ɫ	X				
B27 (46) Y-I	p'ʊ˄ᵊɫ		X			

Table A11. (cont'd.)

LEGEND

A = /ʊ/ = [ʊ˯ ~ ʊ˂ ~ ʊ˄]

B = /ʊ/ = [ʊᵊ]

C = /ʊ/ = [ʊʸ]

D = /ʊ/ = [ᵿ]

E = /ʊ/ = [u]

Informants	Phonetic Transcription	A	B	C	D	E
Black-American						
B28 (83) O-N	pʻʊt	X				
B29 (92) O-N*	pʻʊ·t	X				
B30 (93) O-N*	pʻʊ˄t	X				
B31 (98) M-N*	pʻʊ˄ᵊt		X			
B32 (106) Y-I	pʻʊ˂·t	X				
B33 (112) Y-I	pʻʊ˄·ᵊt		X			
B34 (114) Y-I	pʻʊ˂t	X				
B35 (115) Y-I	pʻᵿt				X	
B36 (115) Y-I	pʻʊ˄ᵊt		X			
B37 (117) Y-N	pʻʊ˄t	X				
B38 (118) Y-I	pʻʊ˂t	X				
B39 (118) Y-I	pʻʊ˂ᵊt		X			
B40 (129) M-I	pʻʊ˄ᵊt		X			
	Black-American Totals:	11	8	0	1	0
Latin-American						
I41 (69) Y-I	pʻʊ˄t	X				
I42 (92) Y-N	pʻʊ˄t	X				
I43 (99) Y-I	pʻu·t					X
I44 (101) Y-I	pʻʊ˄t	X				
I45 (101) Y-I	pʻʊ·t	X				
I46 (105) O-N*	pʻʊ˄t	X				
I47 (114) Y-I	pʻu˅t					X
I48 (120) Y-I	pʻu˅·t					X
I49 (126) Y-I	pʻu·t					X
I50 (128) O-N*	pʻu˅t					X
	Latin-American Totals:	5	0	0	0	5
	Base Sample Totals:	31	11	1	1	6

Table A12. Lexical Variants of Yolk; Allophones of / o /, / ɔ /, and / j / and Incidence of / l /.

LEGEND

A = /o/ = [oʊ ~ oᶷ]
B = /o/ = [oᵊ]
C = /o/ = [o ~ o·]
D = /ɔ/ = [ɔ ~ ɔᶷ]
E = /j/ = [dʒ]
F = /joʊk/ ~ /jɔʊk/ ~ /joək/
G = /joʊlk/ ~ /jɔʊlk/
H = /jɛlo/ ~ /jʌlo/ ~ /jʌlə/

Informants	Phonetic Transcription	A	B	C	D		E		F	G	H
Anglo-American											
A1 (20 Y-N	jo˅·ʊk	X							X		
A2 (20 O-N	jo·ᵊk		X						X		
A3 (26) Y-N	jo·ᶷɫk	X								X	
A4 (34) Y-N	jo·ᶷk	X							X		
A5 (40 M-N	jo·ᶷk	X							X		
A6 (46) M-N	jo˂·ʊk	X							X		
A7 (46) O-N	jo˄ʊ˄k	X							X		
A8 (46) O-N	joᶷk	X							X		
A9 (60) M-N	joʊk	X							X		
A10 (65) M-N	jo·ᶷk	X							X		
A11 (65) O-N	jɔᶷk				X				X		
A12 (71) O-N	jo˄·ʊk	X							X		
A13 (71) O-N	jo·ʊk	X							X		
A14 (75) M-N	jo˂ʊ˅k	X							X		
A15 (75) M-N	joʊk	X							X		
A16 (75) M-N	joᶷk	X							X		
A17 (81) O-N	joᵊk		X						X		
A18 (81) O-N	jo˄ᶷk	X							X		
A19 (86) Y-N	jo˄·ʊk	X							X		
A20 (90) O-N	jo·ʊk	X							X		
	Anglo-American Totals:	17	2	0	1		0		19	1	
Black-American											
B21 (35) Y-N*	jo˅·ʊk	X							X		
B22 (40) Y-N	jo·ʊk	X							X		
B23 (40) Y-N*	jo˂·ʊk	X							X		
B24 (40) Y-N*	jo˅ʊk	X							X		
B25 (46) M-N*	jo˅·ʊk	X							X		
B26 (46) Y-I	jo˅·ʊ˄k	X							X		
B27 (46) Y-I	jɔ·ʊk				X				X		

Table A12. (cont'd.)

LEGEND

A = /o/ = [oʊ~o˅]
B = /o/ = [oᵊ]
C = /o/ = [o~oˑ]
D = /ɔ/ = [ɔ~ɔ˅]
E = /ǰ/ = [dʒ]
F = /joʊk/~/jɔʊk/~/joək/
G = /joʊlk/~/jɔʊlk/
H = /jɛlo/~/jʌlo/~/jʌlə/

Informants	Phonetic Transcription	A	B	C	D		E		F	G	H
Black-American											
B28 (83) O-N	jo˂ˑʊ˄k	X							X		
B29 (92) O-N*	jɔˑɫk				X					X	
B30 (93) O-N*	jo˂ʊk	X							X		
B31 (93) M-N*	jo˅ˑɫk			X						X	
B32 (106) Y-I	jʌ˂lə̆										X
B33 (112) Y-I	jo˅ᵊk		X						X		
B34 (114) Y-I	jo˅ˑʊk	X							X		
B35 (115) Y-I	jo˄ʊˑk	X							X		
B36 (115) Y-I	jʌ˂lə̆										X
B37 (117) Y-N	jo˄ˑʊk	X							X		
B38 (118) Y-I	jo˂ˑᵊk		X						X		
B39 (118) Y-I	jo˂ˑʊk	X							X		
B40 (129) M-I	jo˄͡ʊˑk	X							X		
	Black-American Totals:	13	2	1	2		0		16	2	2
Latin-American											
L41 (69) Y-I	jo˄ˑʊkʻ	X							X		
L42 (92) Y-N	jo˄ˑʊk	X							X		
L43 (99) Y-I	joʊkʻ	X							X		
L44 (101) Y-I	jo˄ˑʊk	X							X		
L45 (101) Y-I	jo˄ʊkʻ	X							X		
L46 (105) O-N*	dʒo˄k			X			X		X		
L47 (114) Y-I	jo˄ˑkʻ			X					X		
L48 (120) Y-I	joˑk			X					X		
L49 (126) Y-I	dʒɛ˄lŏ˄			X			X				X
L50 (128) O-N*	jo˄kʻ								X		
	Latin-American Totals:	5	0	4	0		2		9	0	1
	Base Sample Totals:	34	4	5	3		2		44	3	3

Table A13. Allophones of / ɔ / in *Dog*.

LEGEND

A = [ɔ·~ɔ˄~ɔ˅]
B = [ɒɔ]
C = [a·~a˃]
D = [o˅·~o·]
E = [ɒᵊ]
F = [ɔᵊ]
G = [ɔ]

Informants	Phonetic Transcription	A	B	C	D	E	F	G			
Anglo-American											
A1 (20) Y-N	dɔ˅ᵊg						X				
A2 (20) O-N	dɔ˅ᵊg						X				
A3 (26) Y-N	dɔ˅·ᵊg						X				
A4 (34) Y-N	dɒ·ᵊg					X					
A5 (40) M-N	dɔ˅·g	X									
A6 (46) M-N	dɔ˂·ᵊg						X				
A7 (46) O-N	dɔ˅ᵊg						X				
A8 (46) O-N	dɔ˂˄ᵊg						X				
A9 (60) M-N	dɔ˄g	X									
A10 (55) M-N	dɔ˄g	X									
A11 (65) O-N	dɔ·ᵊg						X				
A12 (71) O-N	dɒɔg		X								
A13 (71) O-N	dɔ˅·ᵊg						X				
A14 (75) M-N	dɔ˅˅g							X			
A15 (75) M-N	dɔ˅·ᵊg						X				
A16 (75) M-N	dɔ˄g	X									
A17 (81) O-N	dɔg	X									
A18 (81) O-N	dɔg	X									
A19 (86) Y-N	dɔ˂˄ᵊg						X				
A20 (90) O-N	dɔ˅g	X									
	Anglo-American Totals:	7	1	0	0	1	10	1			
Black-American											
B21 (35) Y-N*	dɔ˂˅·ᵊg						X				
B22 (40) Y-N	dɔ˅g	X									
B23 (40) Y-N*	dɔ˅·ᵊg						X				
B24 (40) Y-N*	da˃g			X							
B25 (46) M-N*	dɔ˅·g	X									
B26 (46) Y-I	dɔ·ᵊg						X				
B27 (46) Y-I	dɒ·ᵊg					X					

Table A13. (cont'd.)

LEGEND

A = [ɔˑ~ɔ˄~ɔ˅]
B = [ɒɔ]
C = [ɑˑ~ɑ˒]
D = [o˅ˑ~oˑ]
E = [ɒᵊ]
F = [ɔᵊ]
G = [ɔ]

Informants	Phonetic Transcription	A	B	C	D	E	F	G			
Black-American											
B28 (83) O-N	dɔ˅ˑg	X									
B29 (92) O-N*	dɔˑᵊg						X				
B30 (93) O-N*	dɔ˅ˑᵊg						X				
B31 (98) M-N*	dɔˑᵊg						X				
B32 (106) Y-I	dɔ˂˄ˑᵊ						X				
B33 (112) Y-I	dɒɔg		X								
B34 (114) Y-I	dɑˑg			X							
B35 (115) Y-I	dɒɔg		X								
B36 (115) Y-I	dɔ˅ˑᵊg						X				
B37 (117) Y-N	dɒɔg		X								
B38 (118) Y-I	dɒɔg		X								
B39 (118) Y-I	dɒ˄ˑᵊ					X					
B40 (129) M-I	dɒɔg		X								
	Black-American Totals:	3	5	2	0	2	8	0			
Latin-American											
L41 (69) Y-I	dɔ̆˄g	X									
L42 (92) Y-N	dɔˑg	X									
L43 (99) Y-I	dŏ˅ˑk				X						
L44 (101) Y-I	dɔˑ˅g							X			
L45 (101) Y-I	dɔ˄˅g							X			
L46 (105) O-N*	do˅ˑg				X						
L47 (114) Y-I	doˑg				X						
L48 (120) Y-I	dɑ˒g			X							
L49 (126) Y-I	dɑ˒k			X							
L50 (128) O-N*	doˑk				X						
	Latin-American Totals:	2	0	2	4	0	0	2			
	Base Sample Totals:	12	6	4	4	3	18	3			

Table A14. Allophones of / ʌ / in Judge.

LEGEND

A = [ʌ]
B = [ɜ]
C = [ɛ]
D = [ɚ]

E = [ʌᵊ]
F = [ʌᵋ]
G = [ʌᵛ]
H = [a˄]

Informants	Phonetic Transcription	A	B	C	D	E	F	G	H		
Anglo-American											
A1 (20) Y-N	dʒʌˇdʒ	X									
A2 (20) O-N	dʒʌ˂dʒ	X									
A3 (26) O-N	dʒʌᵊdʒ					X					
A4 (34) Y-N	dʒʌ˂d̥ʒ	X									
A5 (40) M-N	dʒʌ˂dʒ	X									
A6 (46) M-N	dʒʌdʒ	X									
A7 (46) O-N	dʒʌᵊdʒ					X					
A8 (46) O-N	dʒʌdʒ	X									
A9 (60) M-N	dʒʌᵊdʒ̊					X					
A10 (65) M-N	dʒʌᵊd̊ʒ					X					
A11 (65) O-N	dʒʌ̆˂dʒ	X									
A12 (71) O-N	dʒɜˑdʒ			X							
A13 (71) O-N	dʒʌdʒ	X									
A14 (75) M-N	dʒɜdʒ		X								
A15 (75) M-N	dʒɜdʒ		X								
A16 (75) M-N	dʒʌᵊdʒ					X					
A17 (81) O-N	dʒʌ˂ᵊdʒ					X					
A18 (81) O-N	dʒʌ˄dʒ	X									
A19 (86) Y-N	dʒʌᵋdʒ						X				
A20 (90) O-N	dʒʌ˂ᵊdʒ					X					
	Anglo-American Totals:	9	2	1	0	7	1				
Black-American											
B21 (35) Y-N*	dʒʌ˄dʒ	X									
B22 (40) Y-N	dʒʌ˂dʒ	X									
B23 (40) Y-N*	dʒʌᵛdʒ							X			
B24 (40) Y-N*	dʒɜˑd̥ʒ̊		X								
B25 (46) M-N*	dʒʌ˂dʒ	X									
B26 (46) Y-I	dʒɜˑdʒ		X								
B27 (46) Y-I	dʒʌ˄dʒ	X									

Table A14. (cont'd.)

LEGEND

A = [ʌ]
B = [ɜ]
C = [ɛ]
D = [ɚ]
E = [ʌᵊ]
F = [ʌᶤ]
G = [ʌ˅]
H = [a·]

Informants	Phonetic Transcription	A	B	C	D	E	F	G	H
Black-American									
B28 (83) O-N	dʒɜdʒ		X						
B29 (92) O-N*	dʒʌ˂ᶤdʒ						X		
B30 (93) O-N*	dʒʌ˄dʒ	X							
B31 (98) M-N*	dʒʌ˂ᵊdʒ					X			
B32 (106) Y-I	dʒɚ˃·dʒ				X				
B33 (112) Y-I	dʒʌᶤdʒ						X		
B34 (114) Y-I	dʒʌ˅d̥ʒ̊							X	
B35 (115) Y-I	dʒʌ˅dʒ							X	
B36 (115) Y-I	dʒɛ˃dʒ			X					
B37 (117) Y-N	dʒʌ˅d̥ʒ̊							X	
B38 (118) Y-I	dʒɚ·dʒ				X				
B39 (118) Y-I	dʒɛ˃d̥ʒ̊			X					
B40 (129) M-I	dʒɚᵊdʒ				X				
	Black-American Totals:	5	3	2	3	1	2	4	0
Latin-American									
L41 (69) Y-I	dʒʌ˅·dʒ	X							
L42 (92) Y-N	dʒʌ˅dʒ̊	X							
L43 (99) Y-I	dʒa˄tʃ								X
L44 (101) Y-I	dʒʌ˅dʒ̊	X							
L45 (101) Y-I	dʒa˄·dʒ̊								X
L46 (105) O-N*	dʒɛ˄dʒ̊			X					
L47 (114) Y-I	dʒʌ˅d̊ʒ̊	X							
L48 (120) Y-I	dʒa˄d̥ʒ̊								X
L49 (126) Y-I	dʒʌ˅d̥ʒ̊	X							
L50 (128) O-N*	dʒa˄dʒ								X
	Latin-American Totals:	5	0	1	0	0	0	0	4
	Base Sample Totals:	19	5	4	3	8	3	4	4

Table A15. Allophones of / ʌ / in Husband.

LEGEND

A = [ʌ]
B = [ɜ]
C = [ʌᵊ]
D = [ʌᶤ]
E = [ʌ˅]
F = [ɑ˄]

Informants	Phonetic Transcription	A	B	C	D	E	F
Anglo-American							
A1 (20) Y-N	hʌ˄zbənᵈ	X					
A2 (20) O-N	hʌ˄˙zbănᵈ	X					
A3 (26) Y-N	hʌ˂zbənᵈ	X					
A4 (34) Y-N	hʌ˂zbən	X					
A5 (40) M-N	hʌ˅zbənd	X					
A6 (46) M-N	hʌ˄zbən	X					
A7 (46) O-N	hʌ˄zbənd	X					
A8 (46) O-N	hʌzbanᵈ	X					
A9 (60) M-N	hʌ̊˄sbə˂n	X					
A10 (65) M-N	hʌ˃sbə˄n	X					
A11 (65) O-N	hʌ˄zbənᵈ	X					
A12 (71) O-N	hʌ˄żbənᵈ	X					
A13 (71) O-N	hʌ˄z ban	X					
A14 (75) M-N	hʌ˄zbə˄nd	X					
A15 (75) M-N	hʌ˂zbən	X					
A16 (75) M-N	hʌ·zbə˄n	X					
A17 (81) O-N	hʌ˃zbənd	X					
A18 (81) O-N	hʌ˃ż bənd	X					
A19 (86) Y-N	hʌ˄z̊bən	X					
A20 (90) O-N	hʌ˄zbanᵈ	X					
	Anglo-American Totals:	20					
Black-American							
B21 (35) Y-N*	hʌ˂zbənᵈ	X					
B22 (40) Y-N	hʌᶤzbən				X		
B23 (40) Y-N*	hʌ˂zba˂n	X					
B24 (40) Y-N*	hʌ˄˅zbən					X	
B25 (46) Y-I	hʌ˄˅sbən					X	
B26 (46) Y-I	hʌ˄ᵊzbən			X			
B27 (46) Y-I	hʌ˅sbə˄n	X					

Table A15. (cont'd.)

LEGEND

A = [ʌ]

B = [ɜ]

C = [ʌᵊ]

D = [ʌᶤ]

E = [ʌ˅]

F = [a˄]

Informants	Phonetic Transcription	A	B	C	D	E	F				
Black-American											
B28 (83) O-N	hʌ˄˅zbən					X					
B29 (92) O-N*	hʌ˄ᵊzbən			X							
B30 (93) O-N*	hʌ˄˅ʃbəˋn					X					
B31 (98) M-N*	hʌ˂ᶤzbən				X						
B32 (106) Y-I	hʌzbə˄n	X									
B33 (112) Y-I	hʌ͡˄ʃbən	X									
B34 (114) Y-I	hɜ̌·zbə˂n		X								
B35 (115) Y-I	hʌ˂ᵊzbə˄n			X							
B36 (115) Y-I	hɜ·sbə˄n		X								
B37 (117) Y-N	hʌ˄ᶤzbə˄n				X						
B38 (118) Y-I	hʌ˂˅zbən					X					
B39 (118) Y-I	hʌ˅˅zbən					X					
B40 (129) M-I	hʌᶤzbə˄n				X						
	Black-American Totals:	5	2	3	4	6	0				
Latin-American											
L41 (69) Y-I	hʌ˅ʃbən	X									
L42 (92) Y-N	hʌ˅zbə˅nd	X									
L43 (99) Y-I	ha˄sbə˄n						X				
L44 (101 Y-I	hʌ˅ʃbənᵈ	X									
L45 (101 Y-I	hʌ˅sbə˅n	X									
L46 (105) O-N*	hʌʃbən	X									
L47 (114) Y-I	ha˄sβə˅n						X				
L48 (120) Y-I	ha˄ʃba˄n						X				
L49 (126) Y-I	ha˄ʃba˃n						X				
L50 (128) O-N*	hasβa˄n						X				
	Latin-American Totals:	5	0	0	0	0	5				
	Base Sample Totals:	30	2	3	4	6	5				

Table A16. Allophones of / aɪ / in *Five*.

LEGEND

A = [ɑᵻ]

B = [ɐᵻ]

C = [aᵻ]

D = [ɑ·ᵻ ~ a·ᵻ ~ ɐ·ᵻ]

E = [a·ᵋ ~ ɑ·ᵋ]

F = [a·ᵊ]

G = [ɑ ~ ɑ·]

Informants	Phonetic Transcription	A	B	C		D	E	F		G	
Anglo-American											
A1 (20) Y-N	fɑᵻv	X									
A2 (20) O-N	fɑᵻv	X									
A3 (26) Y-N	fɑᵻv	X									
A4 (34) Y-N	fɑ·ᵻv					X					
A5 (40) M-N	fɑᵻv	X									
A6 (46) M-N	fɑ^ᵻv	X									
A7 (46) O-N	fɑ<ᵻv	X									
A8 (46) O-N	fɑ·ᵻv					X					
A9 (60) M-N	fɐ·ᵻv					X					
A10 (65) M-N	fɑ^ᵻv	X									
A11 (65) O-N	fɐ·ᵻv					X					
A12 (71) O-N	fɑ·ᵻv					X					
A13 (71) O-N	fa>ᵻv			X							
A14 (75) M-N	fɐ^ᵻv					X					
A15 (75) M-N	fɐᵻv		X								
A16 (75) M-N	fɑᵻv	X									
A17 (81) O-N	fɑᵻv	X									
A18 (81) O-N	fa>ᵻv	X									
A19 (86) Y-N	fɑ<·ᵻv					X					
A20 (90) O-N	fɑᵻv	X									
	Anglo-American Totals:	11	1	1		7	0	0		0	
Black-American											
B21 (35) Y-N*	fɑ<·ᵻv					X					
B22 (40) Y-N	fɑᵻv	X									
B23 (40) Y-N*	fɑ<ᵻv	X									
B24 (40) Y-N*	fɑ·ᵻv					X					
B25 (46) M-N*	fɑ·ᵻv					X					
B26 (46) Y-I	fɑ<·ᵻv					X					
B27 (46)Y-I	fa·ᵋv						X				

Table A16. (cont'd.)

LEGEND

A = [ɑᵻ] D = [ɑ·ᵻ ~ a·ᵻ ~ ɐ·ᵻ] G = [ɑ ~ ɑ·]

B = [ɐᵻ] E = [a·ᵋ ~ ɑ·ᵋ]

C = [aᵻ] F = [a·ᵊ]

Informants	Phonetic Transcription	A	B	C		D	E	F		G	
Black-American											
B28 (83) O-N	fɑᵻv	X									
B29 (92) O-N*	fɑᵻv	X									
B30 (93) O-N*	fa>ᵻv			X							
B31 (98) M-N*	fɑ<·ᵻv					X					
B32 (106) Y-I	fa>ᵻv			X							
B33 (112) Y-I	fɑ<·ᵋv						X				
B34 (114) Y-I	fa·ᵋv						X				
B35 (115) Y-I	fa>ᵻv					X					
B36 (115) Y-I	fa·ᵊv							X			
B37 (117) Y-N	fɑ·ᵻv					X					
B38 (118) Y-I	fɑ<·ᵋv						X				
B39 (118) Y-I	fa·ᵊv							X			
B40 (129) M-I	fa>ᵊv							X			
	Black-American Totals:	4	0	2		7	4	3		0	
Latin-American											
L41 (69) Y-I	fɑᵻv	X									
L42 (92) Y-N	fɑ·ᵻv					X					
L43 (99) Y-I	fɑ^·v									X	
L44 (101) Y-I	fɑᵻv	X									
L45 (101) Y-I	fɑ·ᵻv					X					
L46 (105) O-N*	fɑ·ᵻᵛ					X					
L47 (114) Y-I	fɑf									X	
L48 (120) Y-I	fɑ·ᵻv					X					
L49 (126) Y-I	fɑf									X	
L50 (128) O-N*	fɑ^·f									X	
	Latin-American Totals:	2	1	0		4	4	0		4	
	Base Sample Totals:	17	1	3		18	4	3		4	

Table A17. Allophones of / aɪ / in Twice.

LEGEND

A = [ɑᵻ]
B = [ɐᵻ]
C = [aᵻ]
D = [ɑ·ᵻ ~ a·ᵻ ~ ɐ·ᵻ]
E = [a·ᵋ ~ ɑ·ᵋ]
F = [aᵊ]
G = [ɑ ~ ɑ·]

Informants	Phonetic Transcription	A	B	C		D	E	F		G	
Anglo-American											
A1 (20) Y-N	tʻwɑᵻs	X									
A2 (20) O-N	tʻwɑᵻs	X									
A3 (26) Y-N	tʻwɑᵻs	X									
A4 (34) Y-N	tẇɑᵻs	X									
A5 (40) M-N	tʻwɑ͡ᵻs	X									
A6 (46) M-N	twɑ^ᵻs	X									
A7 (46) O-N	tʻẘɑ˂ᵻs	X									
A8 (46) O-N	tẇɑᵻs	X									
A9 (60) M-N	tʻẘɐᵻst		X								
A10 (65) M-N	tʻwɑᵻs	X									
A11 (65) O-N	twɐᵻs		X								
A12 (71) O-N	tʻwɑ^ᵻs	X									
A13 (71) O-N	twaᵻs			X							
A14 (75) M-N	tʻwɐ·ᵻs					X					
A15 (75) M-N	tʻwɐᵻs		X								
A16 (75) M-N	twɑᵻs	X									
A17 (81) O-N	tʻwɑᵻs	X									
A18 (81) O-N	tʻwaᵻs			X							
A19 (86) Y-N	tʻwɑᵻs	X									
A20 (90) O-N	twɑ^ᵻs	X									
	Anglo-American Totals:	14	3	2		1	0	0		0	
Black-American											
B21 (35) Y-N*	tʻwɑ˂ᵻs	X									
B22 (40) Y-N	tẇɑᵻs	X									
B23 (40) Y-N*	tẇɑ˂ᵻs	X									
B24 (40) Y-N*	twɑᵻs	X									
B25 (46) M-N*	tʻẇɑːᵻs	X									
B26 (46) Y-I	tẇɑᵻst	X									
B27 (46) Y-I	tʻwaᵻs			X							

Table A17. (cont'd.)

LEGEND

A = [ɑᵻ]
B = [ɐᵻ]
C = [aᵻ]
D = [ɑ·ᵻ~a·ᵻ~ɐ·ᵻ]
E = [a·ᵋ~ɑ·ᵋ]
F = [aᵊ]
G = [ɑ~ɑ·]

Informants	Phonetic Transcription	A	B	C		D	E	F		G
Black-American										
B28 (83) O-N	tw̥ɑᵻsᵗ	X								
B29 (92) O-N*	tʻwɑᵻs	X								
B30 (93) O-N*	tʻwaᵻs			X						
B31 (98) M-N*	twɑ˂ᵻsᵗ	X								
B32 (106) Y-I	tʻwɑ˂ᵻs	X								
B33 (112) Y-I	tʻwɑ˂ᵻs	X								
B34 (114) Y-I	tʻwaᵻs			X						
B35 (115) Y-I	tʻwaᵻs			X						
B36 (115) Y-I	tʻwaᵻs			X						
B37 (117) Y-N	tʻẘɑᵻs	X								
B38 (118) Y-I	tʻẇɑ˂ᵻs	X								
B39 (118) Y-I	tʻẘa·ᵊs							X		
B40 (129) M-I	tʻẘa˃ᵻs			X						
	Black-American Totals:	13	0	6		0	0	1		0
Latin-American										
L41 (69) Y-I	tʻwɑ˂ᵻs	X								
L42 (92) Y-N	tʻẇɑᵻs	X								
L43 (99) Y-I	tʻwɑ˄s									X
L44 (101) Y-I	tʻwɑᵻs	X								
L45 (101) Y-I	tʻɑ̆˂ᵻs	X								
L46 (105) O-N*	tʻwɑ·ᵻs					X				
L47 (114) Y-I	tʻẇɑ˂ᵻs									X
L48 (120) Y-I	tʻẇɑᵻs	X								
L49 (126) Y-I	tʻwɑ˄s									X
L50 (128) O-N*	tʻwɑ˄s									X
	Latin-American Totals:	5	0	0		1	0	0		4
	Base Sample Totals:	32	3	8		2	0	1		4

Table A18. Allophones of / au / in Drowned.

LEGEND

A = [ɑʊ~ɑə~ɑo]

B = [aʊ]

C = [æʊ]

D = [ɐʊ]

E = [ɑu]

F = [ɑ·ʊ~a·ʊ~æ·ʊ]

Informants	Phonetic Transcription	A	B	C	D	E	F
Anglo-American							
A1 (20) Y-N	dɹɑ˂ʊnᵈ	X					
A2 (20) O-N	dɹɑʊnd	X					
A3 (26) Y-N	dɹɑʊnd	X					
A4 (34) Y-N	dɹa˃ʊnᵈ		X				
A5 (40) M-N	dɹɑʊnḍ	X					
A6 (46) M-N	dɹaʊnd		X				
A7 (46) O-N	dɹɑʊnd	X					
A8 (46) O-N	dɹaʊ˄nd		X				
A9 (50) M-N	dɹɑ˄ʊnd	X					
A10 (65) M-N	dɹɑ˄ʊnd	X					
A11 (65) O-N	dɹɑʊnᵈ	X					
A12 (71) O-N	dɹɑʊndəd	X					
A13 (71) O-N	dɹɑʊ˅ndəd	X					
A14 (75) M-N	dɹ̥ɑ˂ʊnᵈ	X					
A15 (75) M-N	dɹaʊnᵈ		X				
A16 (75) M-N	dɹɐʊnd				X		
A17 (81) O-N	dɹaʊnd		X				
A18 (81) O-N	dɹɑ˂ən	X					
A19 (86) Y-N	dɹɑ˂ʊnd	X					
A20 (90) O-N	dɹɑʊndəd	X					
	Anglo-American Totals:	14	5	0	1	0	0
Black-American							
B21 (35) Y-N*	dɹɑʊnd	X					
B22 (40) Y-N	dɹɑʊn	X					
B23 (40) Y-N*	dɹɑ˂ʊnd	X					
B24 (40) Y-N*	dɹɑənd	X					
B25 (46) M-N*	dɹaʊnd		X				
B26 (46) Y-I	dɹæ·ʊnd						X
B27 (46) Y-I	dɹæ·ʊn						X

Table A18. (cont'd.)

LEGEND

A = [aʊ~aə~ao]

B = [ɐʊ]

C = [æʊ]

D = [ɘʊ]

E = [au]

F = [a·ʊ~ɐ·ʊ~æ·ʊ]

Informants	Phonetic Transcription	A	B	C	D	E	F
Black-American							
B28 (83) O-N	dɹa˂ʊndəd	X					
B29 (92) O-N*	dɹɐ:ʊnd						X
B30 (93) O-N*	dɹa˂ʊnd	X					
B31 (98) M-N*	dɹæʊnd			X			
B32 (106) Y-I	dɹæʊndɨd			X			
B33 (112) Y-I	dɹæ·ʊn						X
B34 (114) Y-I	dɹa·ʊnᵈ						X
B35 (115) Y-I	dɹa˄ʊndɨd	X					
B36 (115) Y-I	dɹa·ʊn						X
B37 (117) Y-N	dɹa˂ʊnt	X					
B38 (118) Y-I	dɹɐ·ʊnd						X
B39 (118) Y-I	dɹæʊ˄n̊			X			
B40 (129) M-I	dɹæ·ʊnt						X
	Black-American Totals:	8	1	3	0	0	8
Latin-American							
L41 (69) Y-I	dɹaʊnd	X					
L42 (92) Y-N	dɹaʊnd dɹa˄ʊndɨd	X					
L43 (99) Y-I	dr̃aunt					X	
L44 (101) Y-I	dɹa˄on	X					
L45 (101) Y-I	dɹa˄ʊn	X					
L46 (105) O-N*	dɹaʊnd					X	
L47 (114) Y-I	dɹaund					X	
L48 (120) Y-I	dɹa˄unt					X	
L49 (126) Y-I	dɹa˄ʊn	X					
L50 (128) O-N*	dɹau˘nt					X	
	Latin-American Totals:	5	0	0	0	5	0
	Base Sample Totals:	27	6	3	1	5	8

Table A19. Allophones of / au / in Without.

LEGEND

A = [aʊ ~ aə ~ ao]
B = [əʊ]
C = [æʊ]
D = [ɐʊ]
E = [au]
F = [a·ʊ ~ ə·ʊ ~ æ·ʊ]

Informants	Phonetic Transcription	A	B	C	D	E	F				
Anglo-American											
A1 (20) Y-N	wɪ̆θaʊt	X									
A2 (20) O-N	wɪ˃θaʊt	X									
A3 (26) Y-N	wɪ˃θaʊt	X									
A4 (34) Y-N	wɪθə˃ʊt		X								
A5 (40) M-N	wɪ̆θa^ʊt	X									
A6 (46) M-N	wɪ˃ðəʊt		X								
A7 (46) O-N	wɪ˃θa˂ʊt	X									
A8 (46) O-N	wɪ^θəʊt		X								
A9 (60) M-N	wɪθa˂ʊt	X									
A10 (65) M-N	wɪθa˂ʊt	X									
A11 (65) O-N	wɪða^ʊt	X									
A12 (71) O-N	wɪ˃θaot	X									
A13 (71) O-N	wɪða˂ʊt	X									
A14 (75) M-N	wɪða˂ʊt	X									
A15 (75) M-N	wɪ˃θəʊt		X								
A16 (75) M-N	wɪðɐʊt				X						
A17 (81) O-N	wɪðəʊt		X								
A18 (81) O-N	wɪðaət	X									
A19 (86) Y-N	wɪθa^oʊt	X									
A20 (90) O-N	wɪ^ðaʊt	X									
	Anglo-American Totals:	14	5	0	1	0	0				
Black-American											
B21 (35) Y-N*	wɪ˃θa˂ʊt	X									
B22 (40) Y-N	wɪθa^ʊt	X									
B23 (40) Y-N*	wɪ˃θa˂ʊt	X									
B24 (40) Y-N*	wɪ˃θa˂ət	X									
B25 (46) M-N*	wɪðəʊt		X								
B26 (46) Y-I	wɪðæ˅ʊt			X							
B27 (46) Y-I	wɪ˃ðəʊt		X								

Table A19. (cont'd.)

LEGEND

A = [aʊ~aə~ao]
D = [ɞʊ]
B = [ɐʊ]
E = [au]
C = [æʊ]
F = [a·ʊ~ɐ·ʊ~æ·ʊ]

Informants	Phonetic Transcription	A	B	C	D	E	F				
Black-American											
B28 (33) O-N	wɪ^ɵaʊt	X									
B29 (92) O-N*	wɪə̆ɐ˙ʊt		X								
B30 (93) O-N*	wɪ^ɵaʊt	X									
B31 (98) M-N*	wɪ˃ə̆æʊt			X							
B32 (106) Y-I	wɪ˃ɵɐ^ʊt		X								
B33 (112) Y-I	wɪɵɐʊt		X								
B34 (114) Y-I	wɪɵɐ·ʊt						X				
B35 (115) Y-I	wɪ˃ɵɞʊt				X						
B36 (115) Y-I	wɪ˃fæ·ʊt						X				
B37 (117) Y-N	wɪ˃ɵaʊt	X									
B38 (118) Y-I	wɪɵɐ˙ʊt						X				
B39 (118) Y-I	wɪ˃fæʊt			X							
B40 (129) M-I	wɪ˃fæ·ʊt			X							
	Black-American Totals:	7	5	4	1	0	3				
Latin-American											
L41 (69) Y-I	wɪ^ə̆aʊt	X									
L42 (92) Y-N	wɪ^ɵa^ʊt	X									
L43 (99) Y-I	wiˇɵaut‘					X					
L44 (101) Y-I	wɪ^ɵa^ot‘	X									
L45 (101) Y-I	wiˇɵa^ʊt	X									
L46 (105) O-N*	wiˇɵa^ut					X					
L47 (114) Y-I	wiˇta^ut‘					X					
L48 (120) Y-I	wiɵ͡a^ᵘt					X					
L49 (126) Y-I	wiˇɵa^ot‘	X									
L50 (128) O-N*	wɪ^ɵaʊ^t	X									
	Latin-American Totals:	6	0	0	0	4	0				
	Base Sample Totals:	27	10	4	2	4	3				

Table A20. Allophones of / ɔɪ / in Oil.

LEGEND

A = [ɔᵻ]

B = [ɔˑᵻ]

C = [ɒᵻ]

D = [ɔˑᵋ]

E = [ɔˑᵊ]

F = [oˑᵻ]

G = [ɒɔ]

H = [ɔɚ]

Informants	Phonetic Transcription	A	B	C	D	E	F	G	H		
Anglo-American											
A1 (20) Y-N	ɔˑᵻɫ		X								
A2 (20) O-N	ɔ˄ᵻɫ	X									
A3 (26) Y-N	ɔ˄ᵻɫ	X									
A4 (34) Y-N	ɒᵻɫ			X							
A5 (40) M-N	ɔᵻɫ	X									
A6 (46) M-N	ɔᵻɫ	X									
A7 (46) O-N	ɒᵻɫ			X							
A8 (46) O-N	ɔ˄ᵻɫ	X									
A9 (60) M-N	ɔ˄ᵻɫ	X									
A10 (65) M-N	ɔ˄ᵻɫ	X									
A11 (65) O-N	ɔˑᵻɫ		X								
A12 (71) O-N	ɔᵻɫ	X									
A13 (71) O-N	ɔ˄ᵻɫ	X									
A14 (75) M-N	ɔᵻɫ	X									
A15 (75) M-N	ɔ˄ᵻɫ	X									
A16 (75) M-N	ɔ˄ᵻɫ	X									
A17 (81) O-N	ɔˑᵻɫ		X								
A18 (81) O-N	ɔᵻɫ	X									
A19 (86) Y-N	ɔ˅ˑᵻɫ		X								
A20 (90) O-N	ɔ˅ˑᵻɫ		X								
	Anglo-American Totals:	13	5	2	0	0	0	0	0		
Black-American											
B21 (35) Y-N*	ɔˑᵻɫ		X								
B22 (40) Y-N	ɔ˄ᵻɫ	X									
B23 (40) Y-N*	ɔ˅ˑᵻɫ		X								
B24 (40) Y-N*	ɔˑᵻɫ		X								
B25 (46) M-N*	ɔᵻɫ	X									
B26 (46) Y-I	ɔ˄ᵻɫ	X									
B27 (46) Y-I	ɔ˅ᵊɫ					X					

Table A20. (cont'd.)

LEGEND

A = [ɔᵻ]
B = [ɔ·ᵻ̠]
C = [ɒᵻ̠]
D = [ɔ·ᵋ̠]
E = [ɔ·ᵊ]
F = [o·ᵻ]
G = [ɒɔ]
H = [ɔɚ]

Informants	Phonetic Transcription	A	B	C	D	E	F	G	H		
Black-American											
B28 (83) O-N	ɔ˅·ᵻɫ		X								
B29 (92) O-N*	ɔ˄ᵻɫ	X									
B30 (93) O-N*	ɔᵻɫ	X									
B31 (98) M-N*	ɔ·ᵋɫ				X						
B32 (106) Y-I	ɒɔɫ							X			
B33 (112) Y-I	ɒɔɫ							X			
B34 (114) Y-I	ɔɚɫ								X		
B35 (115) Y-I	ɔːᵋɫ				X						
B36 (115) Y-I	ɔ·ᵋɫ				X						
B37 (117) Y-N	ɔᵻɫ	X									
B38 (118) Y-I	ɔ·ᵊɫ					X					
B39 (118) Y-I	ɔ·ᵻɫ		X								
B40 (129) M-I	ɔ·ᵋɫ				X						
	Black-American Totals:	6	5	0	4	2	0	2	1		
Latin-American											
L41 (69) Y-I	oᵻɫ						X				
L42 (92) Y-N	ɔᵻɫ	X									
L43 (99) Y-I	ɔ·ᵊɫ					X					
L44 (101) Y-I	ɔ˄ᵻɫ	X									
L45 (101) Y-I	ɔ˄ᵻɫ	X									
L46 (105) O-N*	ɔ·ᵻɫ		X								
L47 (114) Y-I	o˅ᵻɫ						X				
L48 (120) Y-I	ɔ·ᵊɫ					X					
L49 (126) Y-I	o˅·ᵻɫ						X				
L50 (128) O-N*	ɔ˄·ᵊɫ					X					
	Latin-American Totals:	3	1	0	0	3	3	0	0		
	Base Sample Totals:	22	11	2	4	5	3	2	1		

Table A21. Allophones of / ɜ / in Girl.

LEGEND

A = [ɚ]

B = [ɜ̣ɚ]

C = [ɚᵊ]

D = [ɜ]

E = [ɜᵊ]

F = [əɚ]

Informants	Phonetic Transcription	A	B	C	D	E	F				
Anglo-American											
A1 (20) Y-N	gɜ̣ɚt		X								
A2 (20) O-N	gɚᵊt			X							
A3 (26) Y-N	gɜ̣^ɚtz		X								
A4 (34) Y-N	gɚ̣^t	X									
A5 (40) M-N	gɚt		X								
A6 (46) M-N	gɚᵊt			X							
A7 (46) O-N	gɜ̣ɚt		X								
A8 (46) O-N	gɚ̣ˑtz	X									
A9 (60) M-N	gɜ̣ɚ^tz		X								
A10 (65) M-N	gɚ̣ᵊt			X							
A11 (65) O-N	gɜ̣ɚt		X								
A12 (71) O-N	gɜ̣ɚ^t		X								
A13 (71) O-N	gɚ̣ˑt	X									
A14 (75) M-N	gɜ̣ɚt		X								
A15 (75) M-N	gɚ<t	X									
A16 (75) M-N	gɜ̣^ɚt		X								
A17 (81) O-N	gɚ̣t	X									
A18 (81) O-N	gɚt	X									
A19 (86) Y-N	gɜ̣ɚt		X								
A20 (90) O-N	gɜ̣<ɚt		X								
	Anglo-American Totals:	6	11	3	0	0	0				
Black-American											
B21 (35) Y-N*	gɚ^t	X									
B22 (40) Y-N	gɜ̣ɚt		X								
B23 (40) Y-N*	gɜ̣ɚt		X								
B24 (40) Y-N*	gɚˑt	X									
B25 (46) M-N*	gɜ̣ɚt		X								
B26 (46) Y-I	gɜ̣ɚt		X								
B27 (46) Y-I	gɜ̣ɚt		X								

Table A21. (cont'd.)

LEGEND

A = [ɚ]
B = [ɜ̣ɚ]
C = [ɚᵊ]
D = [ɜ]
E = [ɜᵊ]
F = [əɚ]

Informants	Phonetic Transcription	A	B	C	D	E	F
Black-American							
B28 (83) O-N	gɚt	X					
B29 (92) O-N*	gɜ̣ɚt		X				
B30 (93) O-N*	gɚˑt	X					
B31 (98) M-N*	gɜ̣ɚt		X				
B32 (106) Y-I	gɜᵊt					X	
B33 (112) Y-I	gɜᵊtz					X	
B34 (114) Y-I	gɚtz	X					
B35 (115) Y-I	gɜ̣ɚtz		X				
B36 (115) Y-I	gɜ˃ᵊt					X	
B37 (117) Y-N	gɜᵊt					X	
B38 (118) Y-I	gɜ˄t				X		
B39 (118) Y-I	gɜ˄ᵊt					X	
B40 (129) M-I	gɜ̣ɚt	X					
	Black-American Totals:	6	8	0	1	5	0
Latin-American							
L41 (69) Y-I	gɜ̣ɚt		X				
L42 (92) Y-N	gɜ̣ɚt		X				
L43 (99) Y-I	gəɚt						X
L44 (101) Y-I	gɜ̣˂ɚts		X				
L45 (101) Y-I	gəɚts						X
L46 (105) O-N*	gɚts	X					
L47 (114) Y-I	gəɚť						X
L48 (120) Y-I	gɜ̣ɚts		X				
L49 (126) Y-I	gɚť	X					
L50 (128) O-N*	gəɚts						X
	Latin-American Totals:	2	4	0	0	0	4
	Base Sample Totals:	14	23	3	1	5	4

Table A22. Allophones of / ɜ / in Thirty.

LEGEND
A = [ɚ]
B = [ɜ̣ɚ]
C = [ɚᵊ]
D = [ɜ]
E = [ɜᵊ]
F = [əɚ]
G = [ɜᶦ]

Informants	Phonetic Transcription	A	B	C	D	E	F	G
Anglo-American								
A1 (20) Y-N	θɜ̣ɚtɪ		X					
A2 (20) O-N	θɚt̬ˇi	X						
A3 (26) Y-N	θɜ̣ɚ·ti		X					
A4 (34) Y-N	θɚt̬ɪ	X						
A5 (40) M-N	θɚtɪ	X						
A6 (46) M-N	θɚt̬i·	X						
A7 (46) O-N	θɜ̣ɚt̬ɪ		X					
A8 (46) O-N	θɜ̣ɚt̬iˇ		X					
A9 (60) M-N	θɚtli	X						
A10 (65) M-N	θɜ̣ɚt̬i		X					
A11 (65) O-N	θɜ̣^ɚt̬ɪ		X					
A12 (71) O-N	θɜ̣ɚt̬ɪ		X					
A13 (71) O-N	θɚ·t̬ɪ	X						
A14 (75) M-N	θɜ̣ɚti		X					
A15 (75) M-N	θɚt̬ɪ	X						
A16 (75) M-N	θɜ̣ɚt̬ɪ		X					
A17 (81) O-N	θɚt̬li	X						
A18 (81) O-N	θɚ^t̬i	X						
A19 (86) Y-N	θɜ̣^ɚt̬i		X					
A20 (90) O-N	θɜ̣ɚɾi		X					
	Anglo-American Totals:	9	11	0	0	0	0	0
Black-American								
B21 (35) Y-N*	θɚt̬i	X						
B22 (40) Y-N	θɜ̣ɚt̬ɪ		X					
B23 (40) Y-N*	θɜᶦt̬ɪ							X
B24 (40) Y-N*	θɜ̣ɚt̬ɪ		X					
B25 (46) M-N*	θɜ̣ˇɚt̬ɪ		X					
B26 (46) Y-I	θɜ̣ɚt̬ɪ		X					
B27 (46) Y-I	θɜ̣ɚt̬i		X					

Table A22. (cont'd.)

LEGEND

A = [ɚ]
B = [ɜ̣ɚ]
C = [ɚᵊ]
D = [ɜ]
E = [ɜᵊ]
F = [əɚ]
G = [ɜᶦ]

Informants	Phonetic Transcription	A	B	C	D	E	F	G			
Black-American											
B28 (83) O-N	θɚtɪ	X									
B29 (92) O-N*	θɜɚ̌ti		X								
B30 (93) O-N*	θɚ̇tǐ	X									
B31 (98) M-N*	θɜ̣ɚ̌tɪ˂		X								
B32 (106) Y-I	θɜᶦťɪ							X			
B33 (112) Y-I	θɜᶦɾ̌i							X			
B34 (114) Y-I	tɜədɪ							X			
B35 (115) Y-I	θɜə̇ti		X								
B36 (115) Y-I	θɜᶦťɪ							X			
B37 (117) Y-N	θɜᶦťi							X			
B38 (118) Y-I	θɜťi				X						
B39 (118) Y-I	θɜ̌ᶦtɪ							X			
B40 (129) M-I	θɜ̣ɚt̬ɪ^		X								
	Black-American Totals:	3	9	0	1	0	0	7			
Latin-American											
L41 (69) Y-I	θɜ̣ɚtʻiᵛ		X								
L42 (92) Y-N	θɜ̣ɚťi		X								
L43 (99) Y-I	θəɚťʻiᵛ						X				
L44 (101) Y-I	θɜ̣˂ɚťʻi		X								
L45 (101) Y-I	θəɚťʻi						X				
L46 (105) O-N*	θɚďiᵛ	X									
L47 (114) Y-I	t̺əɚdi						X				
L48 (120) Y-I	θədiᵛ	X									
L49 (126) Y-I	θɚdiᵛ	X									
L50 (128) O-N*	t̺əɚdiᵛ						X				
	Latin-American Totals:	3	3	0	0	0	4	0			
	Base Sample Totals:	15	23	0	1	0	4	7			

Table A23. Variants of the Stressed and Unstressed Vowels in Careless.

LEGEND

A = [ɛ] = stressed vowel
B = [æ] = stressed vowel
C = [e ~ eᶤ] = stressed vowel
D = [ə] = unstressed vowel
E = [ɨ] = unstressed vowel

Informants	Phonetic Transcription	A	B	C	D	E
Anglo-American						
A1 (20) Y-N	kʻæ^ɚlɨs		X			X
A2 (20) O-N	kʻɛ^ɚləs	X			X	
A3 (26) Y-N	kʻæ^ɚlə^s		X		X	
A4 (34) Y-N	kʻɛɚləs	X			X	
A5 (40) M-N	kʻɛ˅ɚlɨs	X			X	
A6 (46) M-N	kʻɛ˅ɚlɨs	X				X
A7 (46) O-N	kʻɛ^ɚlɨs	X				X
A8 (46) O-N	kɛɚlə̂s	X			X	
A9 (60) M-N	kʻɛɚləs	X			X	
A10 (65) M-N	kʻɛɚlɨs	X				X
A11 (65) O-N	kɛ˃ɚlə^s	X			X	
A12 (71) O-N	kʻɛ^ɚləs	X			X	
A13 (71) O-N	kʻɛɚləs	X			X	
A14 (75) M-N	kʻɛ^ɚlə^s	X			X	
A15 (75) M-N	kɛ˃ɚlɨ˂s	X				X
A16 (75) M-N	kʻeᶤɚləs			X	X	
A17 (81) O-N	kʻɛ˅ɚlɨs	X				X
A18 (81) O-N	kɛ˅ɚləs	X			X	
A19 (86) Y-N	kʻɛ^ɚləs	X				X
A20 (90) O-N	kʻɛ˃ɚlɨs	X				X
	Anglo-American Totals:	17	2	1	12	8
Black-American						
B21 (35) Y-N*	kʻɛɚlɨs	X				X
B22 (40) Y-N	kʻɛ^ɚləs	X			X	
B23 (40) Y-N*	kʻɛ˃ə̣ləs	X			X	
B24 (40) Y-N*	kɛ^ɚlə^s	X			X	
B25 (46) M-N*	kʻɛ˃ɚlɨs	X				X
B26 (46) Y-I	kʻɛ˃ə̣lɨs	X			X	
B27 (46) Y-I	kʻɛ˃əlɨs	X			X	

Table A23. (cont'd.)

LEGEND

A = [ɛ] = stressed vowel D = [ə] = unstressed vowel

B = [æ] = stressed vowel E = [ɨ] = unstressed vowel

C = [e ~ $e^{ɨ}$] = stressed vowel

Informants	Phonetic Transcription	A	B	C		D	E
Black-American							
B28 (83) O-N	kɛɚ/əs	X				X	
B29 (92) O-N*	kɛ^ɚ/ɨs	X					X
B30 (93) O-N*	kˈɛ˃ə/əs	X				X	
B31 (98) M-N*	kɛ^ɚ/əs	x				X	
B32 (106) Y-I	kˈe^{v}·ə/ɨs			X			X
B33 (112) Y-I	kˈe^{v}·ə̂/ɨs			X			X
B34 (114) Y-I	kɛ^ə̂/ɨs	X					X
B35 (115) Y-I	kˈæ̂^ə/ɨs		X				X
B36 (115) Y-I	kˈæ^·ə/ɨs		X				X
B37 (117) Y-N	kˈɛ˃ə/əs	X				X	
B38 (118) Y-I	kɛ˃ə̇/ɨs	X					X
B39 (118) Y-I	kˈɛ˃ə̂/ɨs	X					X
B40 (129) M-I	kˈɛ^ə̣̇/ɨs	X					X
	Black-American Totals:	16	2	2		7	13
Latin-American							
L41 (69) Y-I	kˈɛ^ɚ/əs	X				X	
L42 (92) Y-N	kˈ$e^{vɨ}$ə/ɨs			X			X
L43 (99) Y-I	kˈ$e^{vɨ}$ɚ/ɨs			X			X
L44 (101) Y-I	kˈɛ^·ɚ/əs	X				X	
L45 (101) Y-I	kɛ^ə̣/ɨs	X					X
L46 (105) O-N*	kˈɛ^ɚ/ɨs	X					X
L47 (114) Y-I	kɛɚ/ɨs	X					X
L48 (120) Y-I	kˈɛ^ɚ/ɨs	X					X
L49 (126) Y-I	kɛ^ɚ/ɨs	X					X
L50 (128) O-N*	k$e^{ɨ}$ə/ɨs			X			X
	Latin-American Totals:	7	0	3		2	8
	Base Sample Totals:	40	4	6		21	29

Table A24. Allophones of / ɪ / and Incidence of / č /, / š /, / l / and / b / in *Chimney*.

LEGEND

A = /č/ = [tʃ]
C = /ɪ/ = [ɪ~ᵻ]
E = /n/ = [n]
B = /š/ = [ʃ]
D = /ɪ/ = [i˅~i˅·]
F = /l/ = [l]
G = /b/ = [β]

Informants	Phonetic Transcription	A	B	C	D	E	F	G
Anglo-American								
A1 (20) Y-N	tʃɪ˄mnᵻ˂	X		X		X		
A2 (20) O-N	tʃɪ˃mni˅	X		X		X		
A3 (26) Y-N	tʃɪmnĩ	X		X		X		
A4 (34) Y-N	tʃɪmnᵻ	X		X		X		
A5 (40) M-N	tʃɪ˃mni	X		X		X		
A6 (46) M-N	tʃᵻmnɪ˄i	X		X		X		
A7 (46) O-N	tʃɪ˃mnɪ˄i·	X		X		X		
A8 (46) O-N	tʃɪ˅mnɪi	X		X		X		
A9 (60) M-N	tʃɪ˃mlɪ˄i	X		X			X	
A10 (65) M-N	tʃɪ˃mni˅	X		X		X		
A11 (65) O-N	tʃɪ˄mnɪ˄	X		X		X		
A12 (71) O-N	tʃʻɪ˄mnɪ͡i	X		X		X		
A13 (71) O-N	tʃɪ˄mnɪi	X		X		X		
A14 (75) M-N	tʃɪmli˅	X		X			X	
A15 (75) M-N	tʃɪmnɪ͡i	X		X		X		
A16 (75) M-N	tʃɪmnɪi	X		X		X		
A17 (81) O-N	tʃɪ˅mnɪ͡i	X		X		X		
A18 (81) O-N	tʃɪ˅mᵊli˅	X		X			X	
A19 (86) Y-N	tʃɪ˄mni	X		X		X		
A20 (90) O-N	tʃɪ˄mnɪʻi	X		X		X		
	Anglo-American Totals:	20	0	20	0	17	3	0
Black-American								
B21 (35) Y-N*	tʃɪ˃mnᵻ	X		X		X		
B22 (40) Y-N	tʃɪmnɪ˄i	X		X		X		
B23 (40) Y-N*	tʃᵻmlᵻ	X		X			X	
B24 (40) Y-N*	tʃɪ˃mlᵻ	X		X			X	
B25 (46) M-N*	tʃɪ˃mnᵻ	X		X		X		
B26 (46) Y-I	tʃɪ˃mᵻnɪ˄i	X		X		X		
B27 (46) Y-I	tʃᵻmlɪ˄i	X		X			X	

Table A24. (cont'd.)

LEGEND

A = /č/ = [ᵗʃ]
B = /š/ = [ʃ]
C = /ɪ/ = [ɪ~ɨ]
D = /ɪ/ = [iᵛ~iᵛˑ]
E = /n/ = [n]
F = /l/ = [l]
G = /b/ = [β]

Informants	Phonetic Transcription	A	B	C	D	E	F	G
Black-American								
B28 (83) O-N	tʃɪmnɨ˂	X		X		X		
B29 (92) O-N*	tʃɪmnɪ˃	X		X		X		
B30 (93) O-N*	tʃɪ˃mnɨ	X		X		X		
B31 (98) M-N*	tʃɪ˃mlɪ˃	X		X			X	
B32 (106) Y-I	tʃɪ˃mli	X		X			X	
B33 (112) Y-I	tʃɪ˃mni	X		X		X		
B34 (114) Y-I	tʃɪ˃mnɪ˃	X		X		X		
B35 (115) Y-I	tʃɪmniˑ	X		X		X		
B36 (115) Y-I	ʃɨ̆mli		X	X			X	
B37 (117) Y-N	tʃɪ˃mni	X		X		X		
B38 (118) Y-I	tʃɪ˃mnɨ	X		X		X		
B39 (118) Y-I	tʃɪ˃mlɨ	X		X			X	
B40 (129) M-I	tʃɪ^mliˑ	X		X			X	
	Black-American Totals:	19	1	20	0	12	8	0
Latin-American								
L41 (69) Y-I	tʃɪ^mni	X		X		X		
L42 (92) Y-N	tʃɪ^mᵊni	X		X		X		
L43 (99) Y-I	tʃiᵛᵛmni	X			X	X		
L44 (101) Y-I	tʃɪ^mni	X		X		X		
L45 (101) Y-I	tʃiᵛmni	X			X	X		
L46 (105) O-N*	ʃɪ^mɨni		X	X		X		
L47 (114) Y-I	ʃiˑmni		X		X	X		
L48 (120) Y-I	ʃimniᵛ tʃiᵛmli	X	X		X	X	X	
L49 (126) Y-I	ʃiᵛmni		X		X	X		
L50 (128) O-N*	tʃɪ^mβɚ	X		X				X
	Latin-American Totals:	7	4	5	5	9	1	1
	Base Sample Totals:	46	5	45	5	33	12	1

Table A25. Incidence of / ɔ /, / ɑ /, and / o / and Allophones of / r / in Morning and Mourning.

LEGEND

A = /ɔ/ in morning and mourning
B = /ɔ/ in morning; /o/ in mourning
C = /ɔ/ in morning; /a/ in mourning
D = /a/ in morning; /o/ in mourning

E = /r/:[ɚ] in morning
F = /r/:[ə̣] in morning
G = /r/·[ə̇] in morning

Informants	Phonetic Transcription		A	B	C	D			E	F	G
Anglo-American	morning	mourning									
A1 (20) Y-N	mɔ˅·ɚnᵻŋ	mɔ^·ɚnᵻŋ	X						X		
A2 (20) O-N	mɔɚnᵻŋ	mɔ^·ɚnᵻŋ	X						X		
A3 (26) Y-N	mɔ˅·ɚnᵻŋ	mɔ˅·ɚnᵻŋ	X						X		
A4 (34) Y-N	mɒɚnᵻŋ	mɔ^·ɚnᵻŋ	X						X		
A5 (40) M-N	mɔ^ɚnᵻŋ	mo·ɚnᵻŋ		X					X		
A6 (46) M-N	mɔ·ɚnᵻŋ	mɔ^·ɚnᵻŋ	X						X		
A7 (46) O-N	mɔ^·ɚnᵻŋ	mɒ·ɚnᵻŋ	X						X		
A8 (46) O-N	mɔ^·ɚnᵻŋ	mɔ·ɚnɪ˂ŋ	X						X		
A9 (60) M-N	mɔ^ɚnᵻ˂ŋ	mɔ^ɚnɪŋ	X						X		
A10 (65) M-N	mɔ·ɚnᵻŋ	mɔ^ɚnᵻŋ	X						X		
A11 (65) O-N	mɔ˅·ɚnᵻŋ	mɔɚnᵻŋ	X						X		
A12 (71) O-N	mɔ^ɚnᵻŋ	mɔ^ɚnɛ˂n	X						X		
A13 (71) O-N	mɔ·ɚnᵻŋ	mɔ·ɚnᵻŋ	X						X		
A14 (75) M-N	mɔ^ɚnᵻŋ	mo˅·ɚnᵻŋ		X					X		
A15 (75) M-N	mɔɚnᵻŋ	mɔ^·ɚnᵻŋ	X						X		
A16 (75) M-N	ˈmɔ^ɚnᵻŋ	mɔ·ɚnᵻŋ	X						X		
A17 (81) O-N	mɔ^ɚnᵻŋ	ma˃ɚnɛŋ			X				X		
A18 (81) O-N	mɔ^ɚnᵻ˂ŋ	mɔ^ɚnɛ˂ŋ	X						X		
A19 (86) Y-N	mɔ˅ɚnᵻŋ	mɔ˅ɚnᵻŋ	X						X		
A20 (90) O-N	mɔ·ɚnᵻŋ	mɔɚnɛ̃˄ŋ	X						X		
		Anglo-American Totals:	17	2	1	0			20	0	
Black-American											
B21 (35) Y-N*	mɔ·ɚnᵻŋ	mɔ˅·ɚnᵻŋ	X						X		
B22 (40) Y-N	mɔ^·ɚnᵻŋ	mɔ·ɚnᵻŋ	X						X		
B23 (40) Y-N*	mɔ·ənᵻŋ	mɔ˅·ənᵻŋ	X								X
B24 (40) Y-N*	mɔ·ɚnᵻŋ	mo˅·ɚnᵻŋ		X					X		
B25 (46) M-N*	mɔ˅·ɚnᵻŋ	mɔ^·ɚnᵻŋ	X						X		
B26 (46) Y-I	mɔə̣nᵻŋ	mɔ^·ɚnᵻŋ	X							X	
B27 (46) Y-I	mɔ˅·ə̣nᵻŋ	mo·ə̣nᵻŋ		X						X	

Table A25. (cont'd.)

LEGEND

A = /ɔ/ in morning and mourning
B = /ɔ/ in morning; /o/ in mourning
C = /ɔ/ in morning; /ɑ/ in mourning
D = /ɑ/ in morning; /o/ in mourning

E = /r/=[ɚ] in morning
F = /r/=[ə̣] in morning
G = /r/=[ə̇] in morning

Informants	Phonetic Transcription		A	B	C	D			E	F	G	
Black-American	morning	mourning										
B28 (83) O-N	mɔ^ɚnɨŋ	mɔᵛ·ɚnɨŋ	X						X			
B29 (92) O-N*	mɔ^ə̣nɨŋ	mɔ·ɚnɨŋ	X							X		
B30 (93) O-N*	mɔ·ɚnɨŋ	mɔ^·ɚnɨŋ	X						X			
B31 (98) M-N*	mɔᵛ·ə̣nɨn	moᵛə̣nɨŋ		X						X		
B32 (106) Y-I	mɔ·ənɨŋ	mɔ^ə̣nɨŋ	X								X	
B33 (112) Y-I	mɔ^·ənɨ̆n	moᵛənɨŋ		X							X	
B34 (114) Y-I	mɔᵛ·ə̣nɨŋ	mɑʼə̣nɨn			X					X		
B35 (115) Y-I	mɔ^ə̣nɨn	mɔᵛə̣nɨŋ	X							X		
B36 (115) Y-I	mɔ^·ᵊnɨn	mo·ənɨn		X							X	
B37 (117) Y-N	mɔ·ɚnɨŋ	mɔ·ə̣nɨŋ	X						X			
B38 (118) Y-I	mɔ^ə̣nɨŋ	moᵛ·ə̣nɨŋ		X						X		
B39 (118) Y-I	mɔ^ənɨn	moᵛənɨn		X							X	
B40 (129) M-I	mɔᵛ·ə̣nɨn	moᵛə̣nɨn		X						X		
		Black-American Totals:	11	8	1	0			7	8	5	
Latin-American												
L41 (69) Y-I	mɔ^ɚnɨŋ	mɔ^ɚnɨŋ	X						X			
L42 (92) Y-N	mɔ^ɚnɨŋ	mɔ^·ɚnɨŋ	X							X		
L43 (99) Y-I	mɔ^ɚ̇nᶤᵑ	moᵛ·ɚnɨŋ		X					X			
L44 (101) Y-I	mɔ^ə̣nɨŋ	mɔ^ənɨŋ	X							X		
L45 (101) Y-I	mɔ·ə̣nɨŋ	moᵛ·ə̣nɨŋ		X						X		
L46 (105) O-N*	mɔ^ɚnɨŋ	moᵛ·ɚnɨŋ		X					X			
L47 (114) Y-I	mɔᵛə̣nɨŋ	mo·ɚnɨn		X						X		
L48 (120) Y-I	mɑ·ɚnɨŋ	moᵛɚnɨŋ				X				X		
L49 (126) Y-I	mɑ^ɚnɨn	mo·ɚnɨn				X				X		
L50 (128) O-N*	mɔ^ɚnɨŋ	moᵛənɨŋ		X						X		
		Latin American Totals:	3	5	0	2			3	7	0	
		Base Sample Totals:	31	15	2	2			30	17	5	

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APPENDIX B

ALLOPHONES OF VOWEL PHONEMES IN THE SPEECH OF TYPE I AND II INFORMANTS IN THE AREA SURROUNDING FORT WAYNE (INDIANA). SOURCE OF DATA: LINGUISTIC ATLAS ARCHIVES FOR NORTH CENTRAL STATES, UNIVERSITY OF CHICAGO

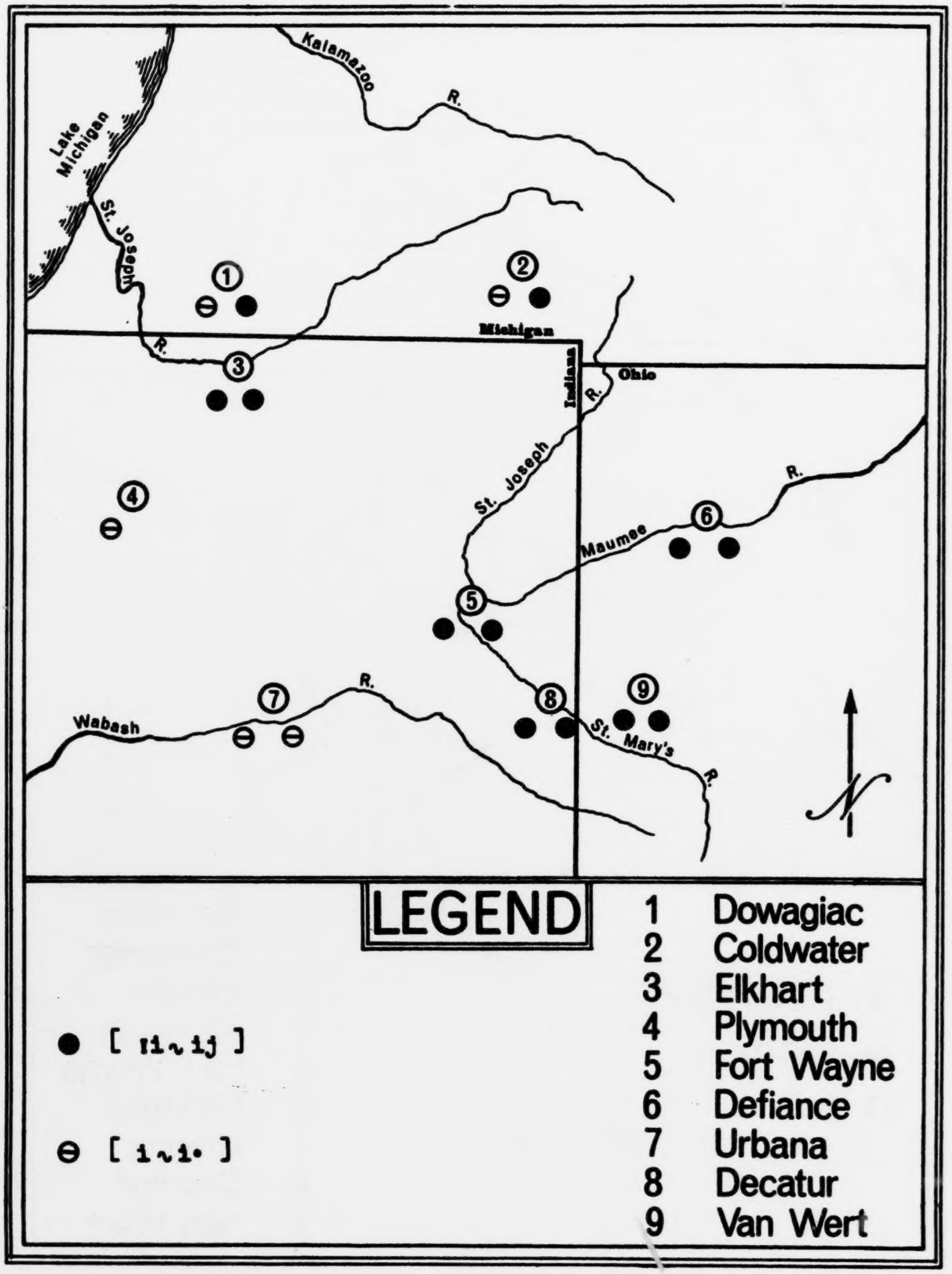
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
N
1
2
3
4
5
6
7
8
9
LEGEND
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert
● [ɪi ~ ij]
⊖ [i ~ i·]

Figure B1. Variants of / i / in *Greasy*.

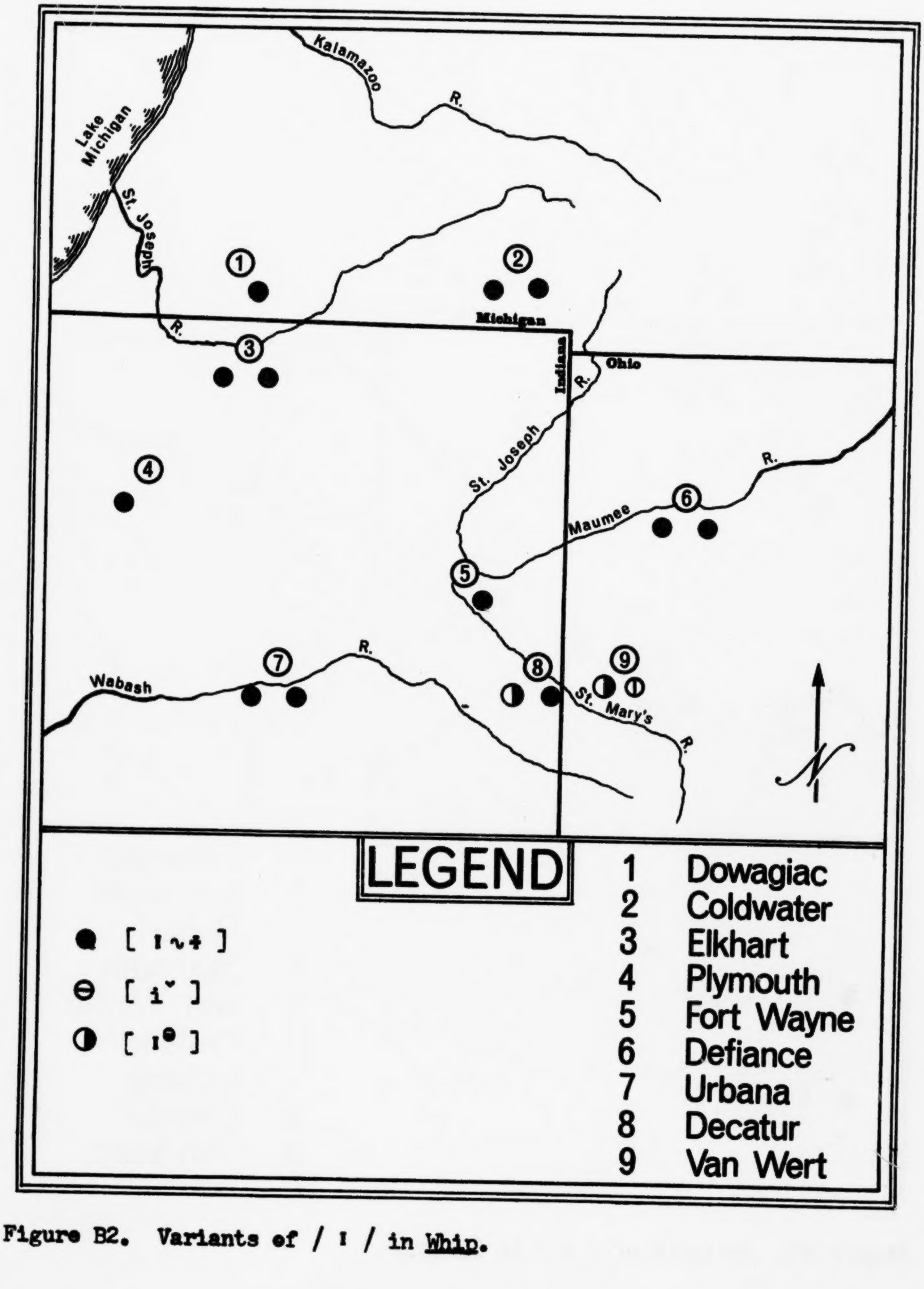
Kalamazoo R.
Lake Michigan
St. Joseph R.
Michigan
Indiana
Ohio
St. Joseph R.
Maumee R.
Wabash R.
St. Mary's R.
N
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
LEGEND
● [ɪ∼ɨ]
⊖ [iˇ]
◑ [ɪᵊ]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B2. Variants of / ɪ / in Whip.

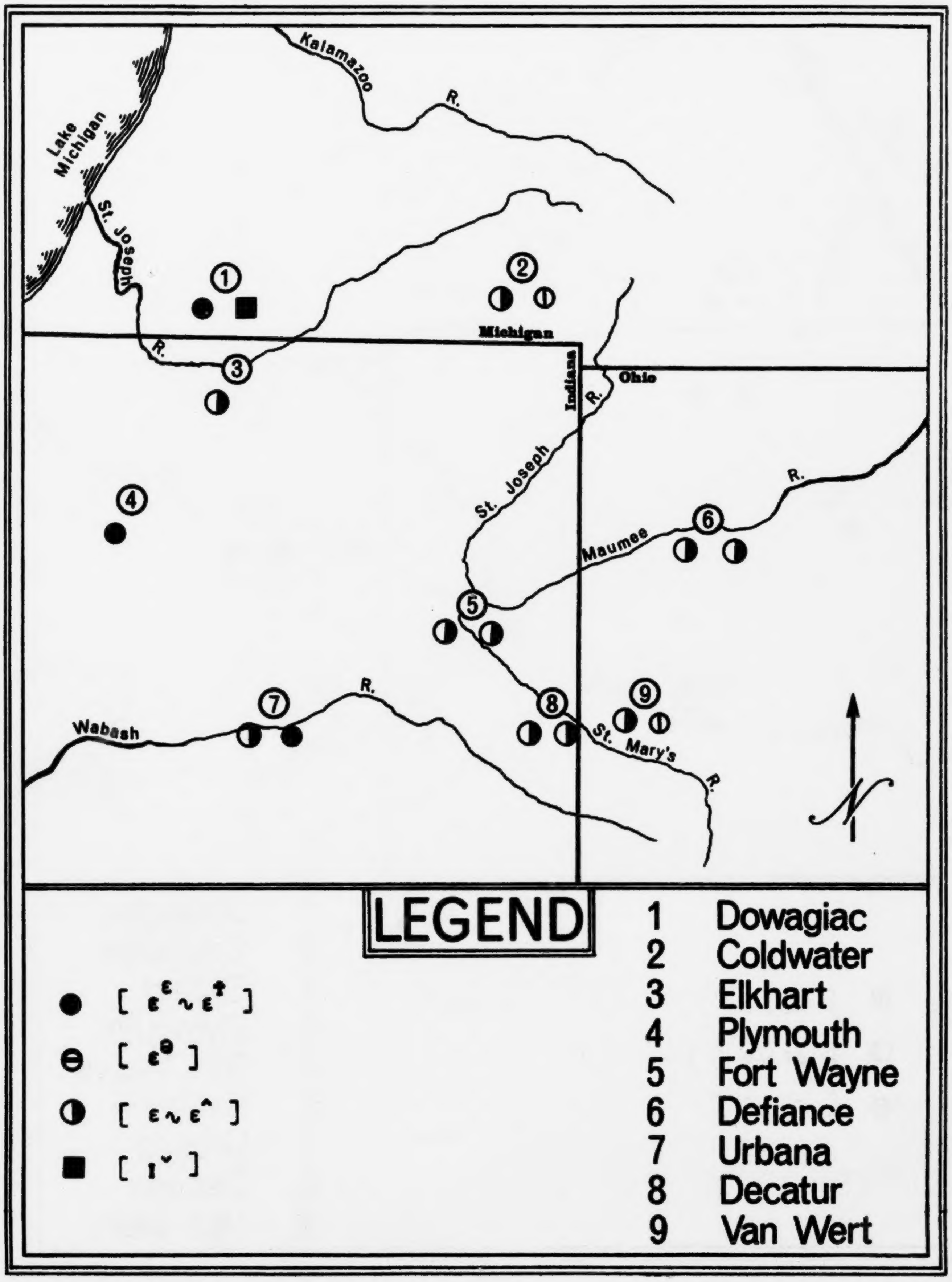
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
N
①
②
③
④
⑤
⑥
⑦
⑧
⑨
LEGEND
● [$ɛ^{ɛ} \sim ɛ^{ɨ}$]
⊖ [$ɛ^{ə}$]
◐ [$ɛ \sim ɛ^{\wedge}$]
■ [$ɪ^{\vee}$]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B3. Variants of / ɛ / in *Ten*.

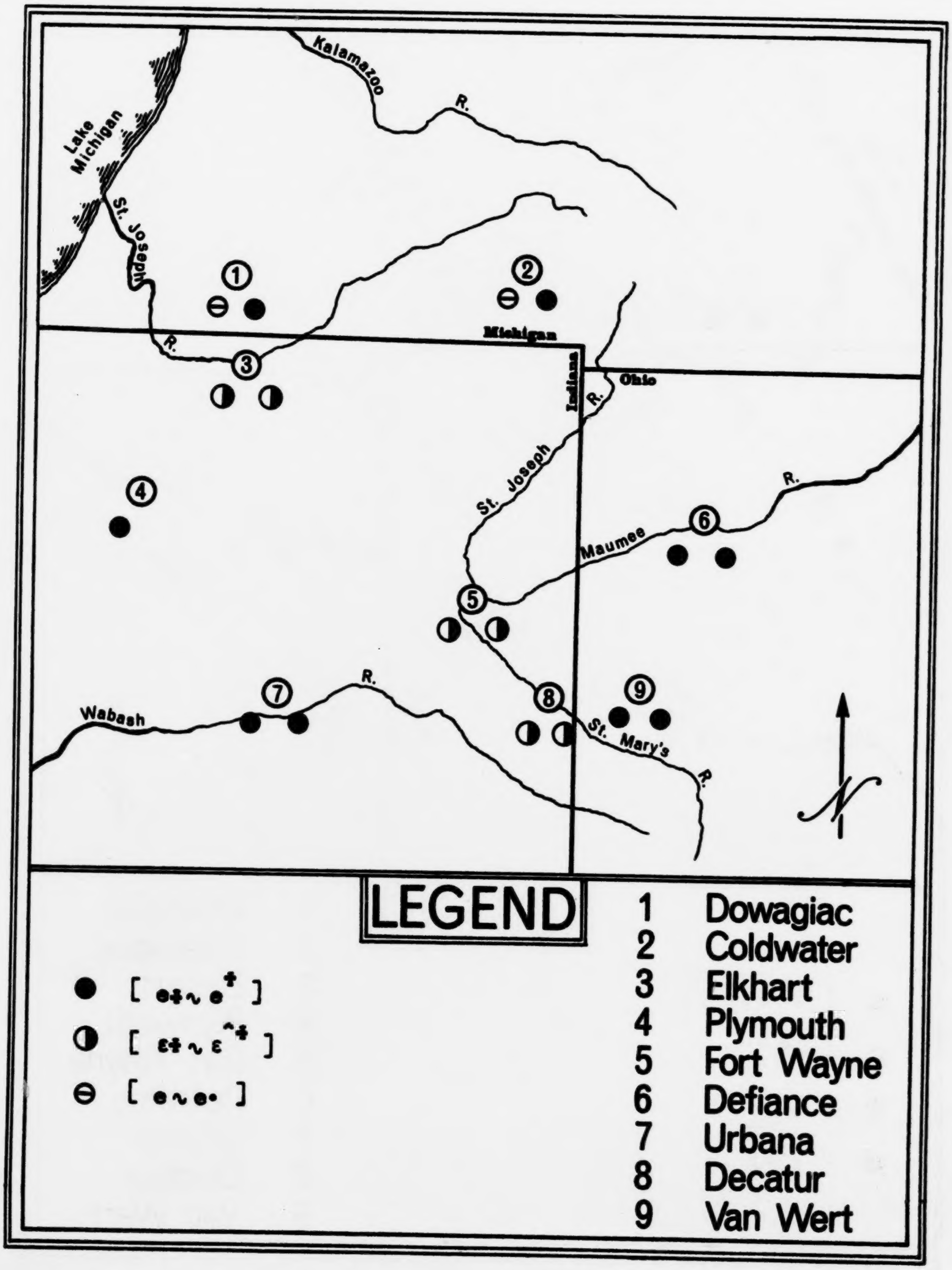
Lake Michigan
Kalamazoo R.
St. Joseph R.
Michigan
Indiana
Ohio
St. Joseph R.
Maumee R.
Wabash R.
St. Mary's R.
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
LEGEND
● [e‡ ∿ e^‡]
◑ [ε‡ ∿ ε^‡]
⊖ [e ∿ e·]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B4. Variants of / e / in April.

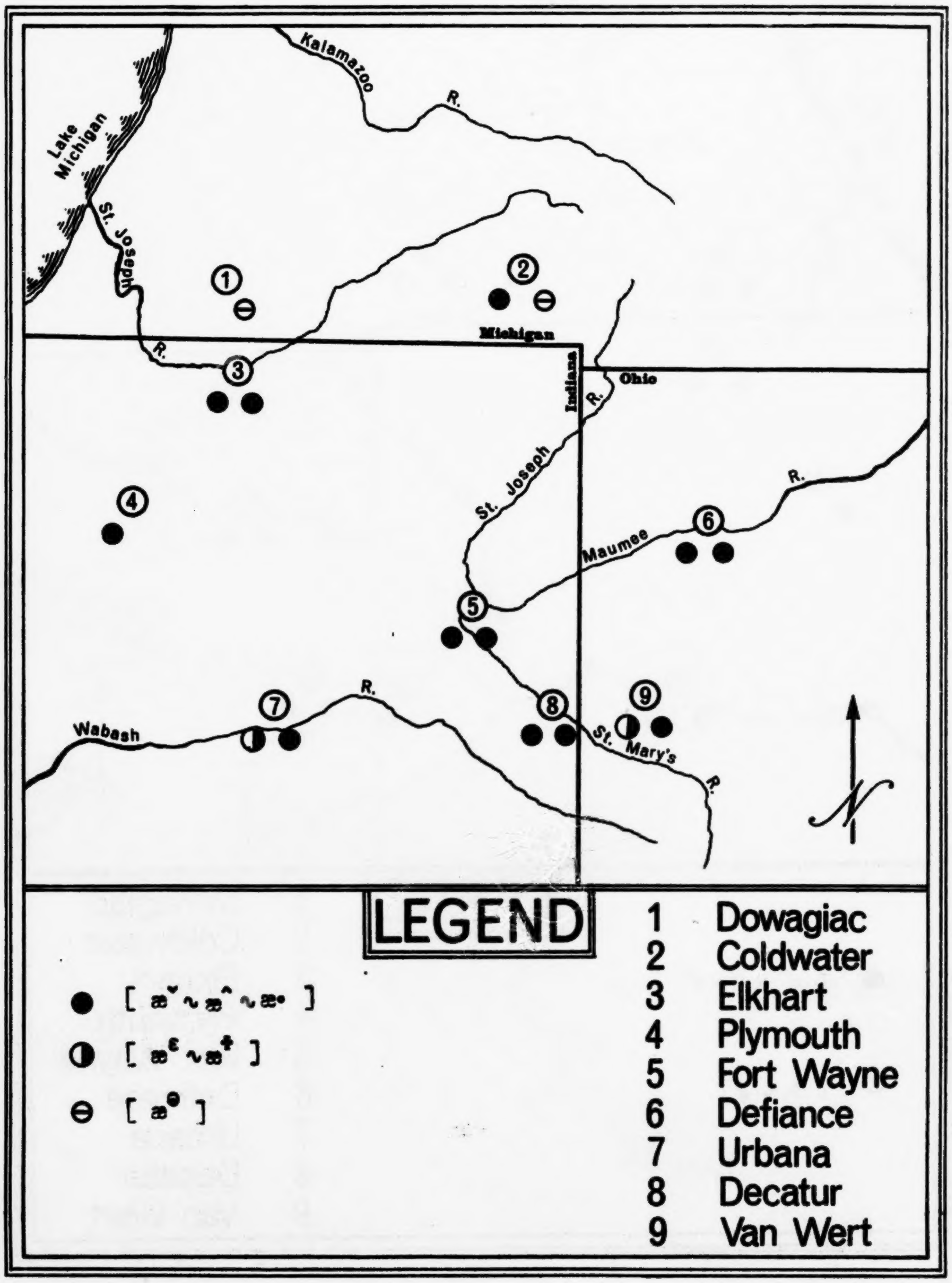
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
N
①
②
③
④
⑤
⑥
⑦
⑧
⑨
LEGEND
● [æ˅ ∼ æ˄ ∼ æˑ]
◑ [$æ^{ɛ}$ ∼ $æ^{ɨ}$]
⊖ [$æ^{ə}$]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B5. Variants of / æ / in Ashes.

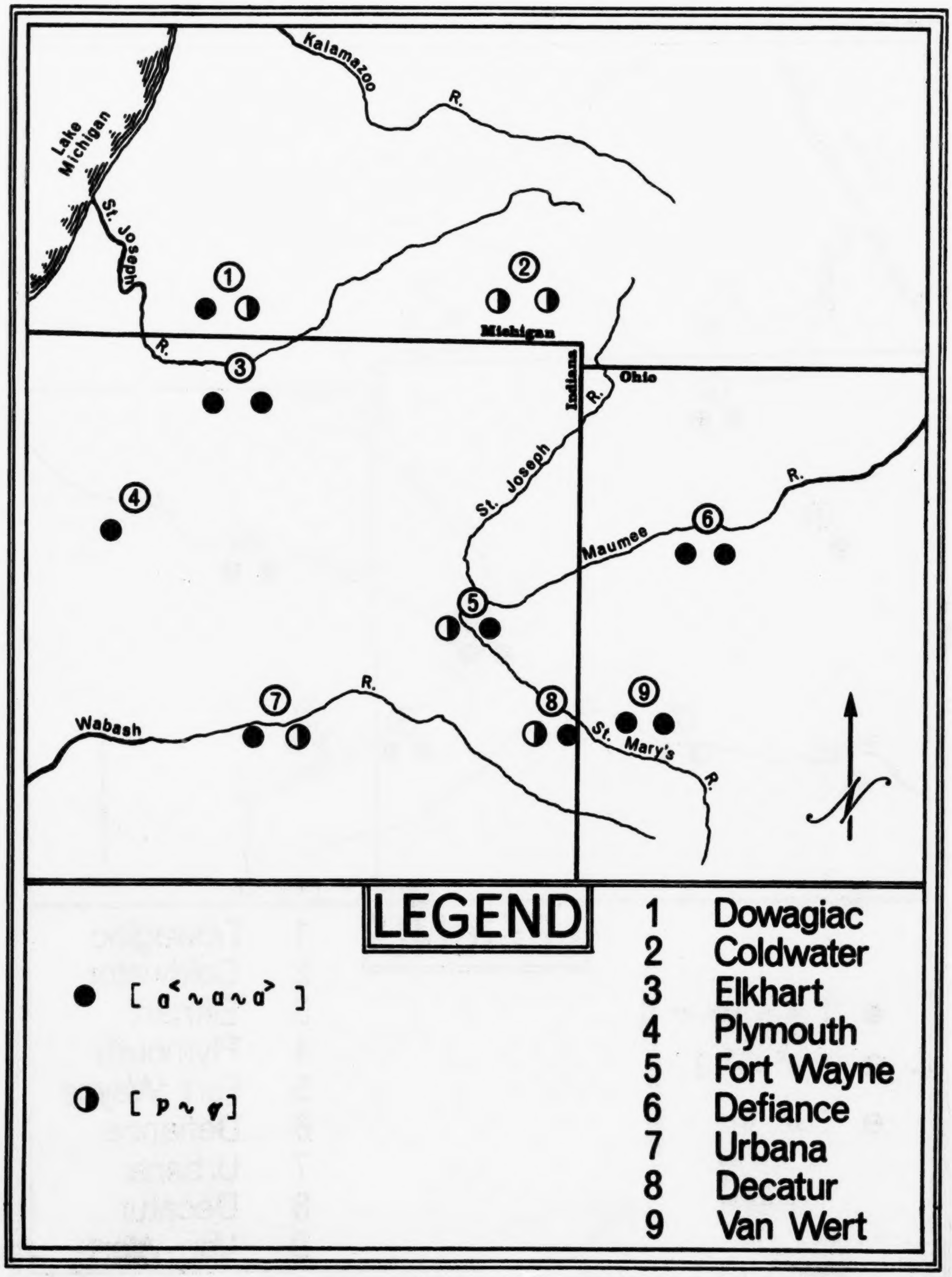
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
N
①
②
③
④
⑤
⑥
⑦
⑧
⑨
LEGEND
● [ɑ< ~ ɑ ~ ɑ>]
◐ [ɒ ~ ɣ]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B6. Variants of / ɑ ~ ɣ/ in Tomorrow.

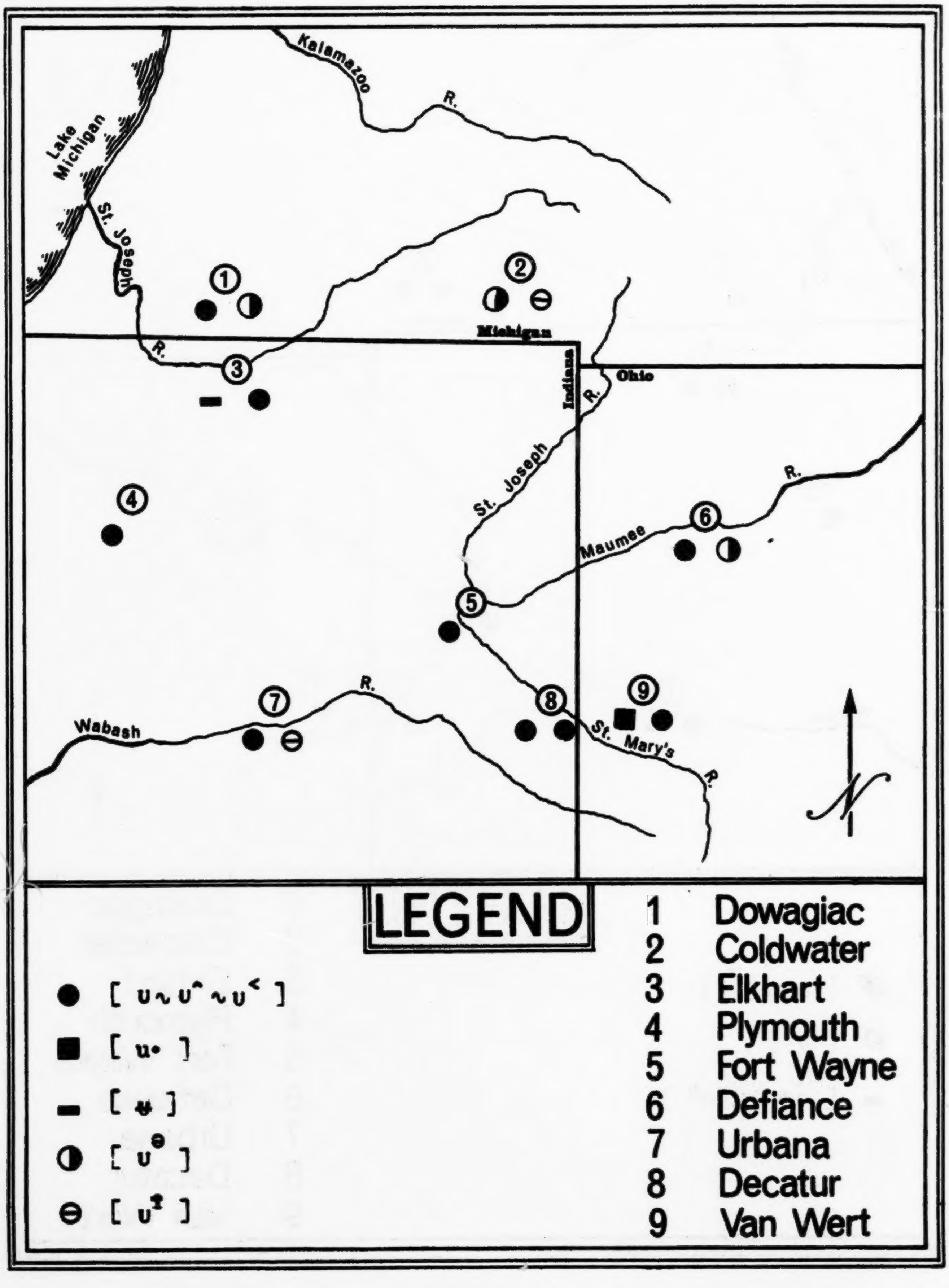
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
N
1
2
3
4
5
6
7
8
9
LEGEND
● [ʊ~ʊ^~ʊ<]
■ [u·]
▬ [ʉ]
◐ [$ʊ^{ə}$]
⊖ [$ʊ^{ɨ}$]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B7. Variants of / ʊ / in Push.

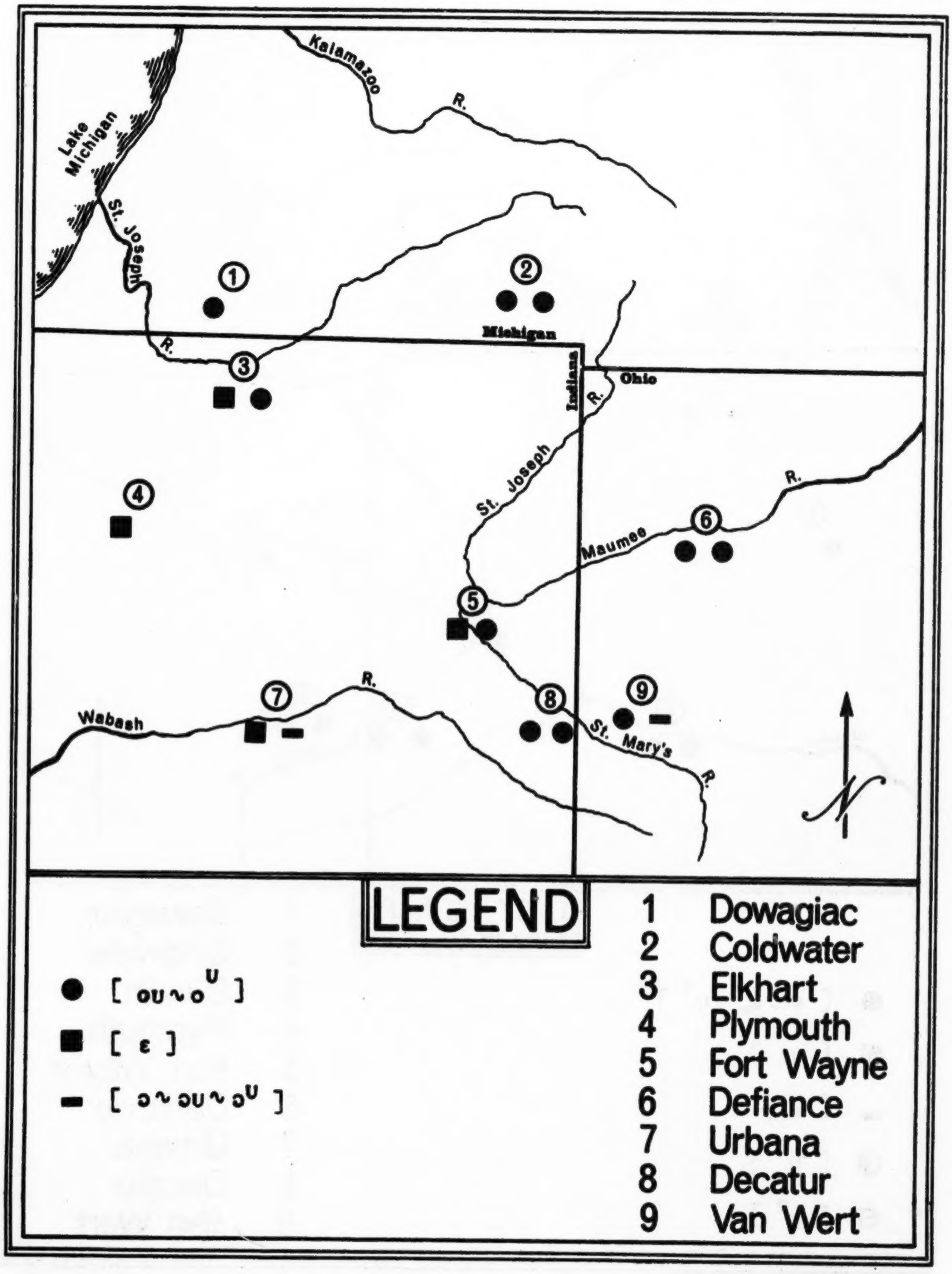
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
N
①
②
③
④
⑤
⑥
⑦
⑧
⑨
LEGEND
● [oʊ ~ o^ʊ]
■ [ɛ]
▬ [ɔ ~ ɔʊ ~ ɔ^ʊ]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B8. Variants of / o / in Yolk.

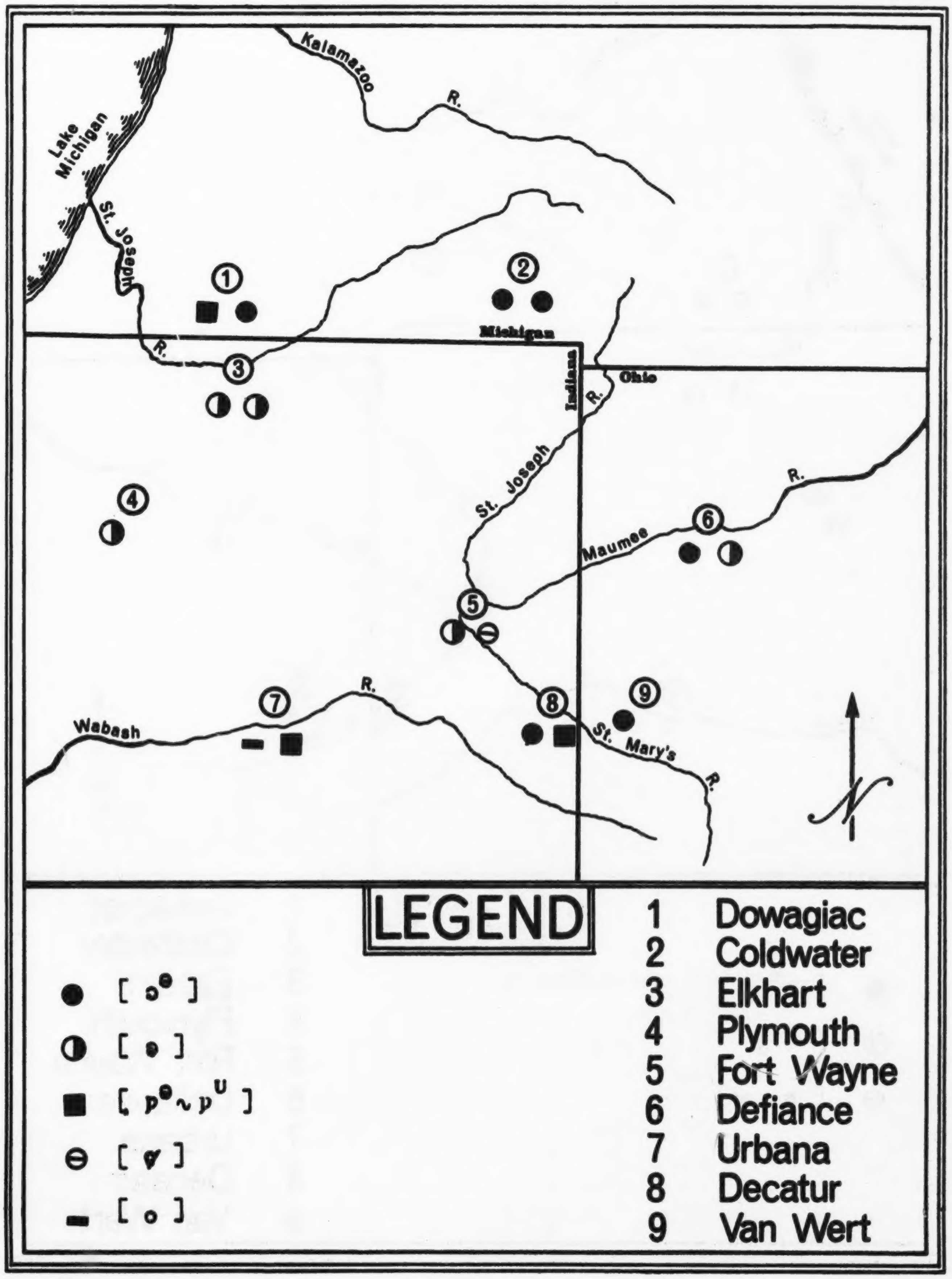
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
Maumee
R.
Wabash
R.
St. Mary's
R.
①
②
③
④
⑤
⑥
⑦
⑧
⑨
N
LEGEND
● [ɔᵊ]
◑ [ɒ]
■ [ɒᵊ ~ ɒᵁ]
⊖ [ɐ]
▬ [o]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B9. Variants of / ɔ / in Dog.

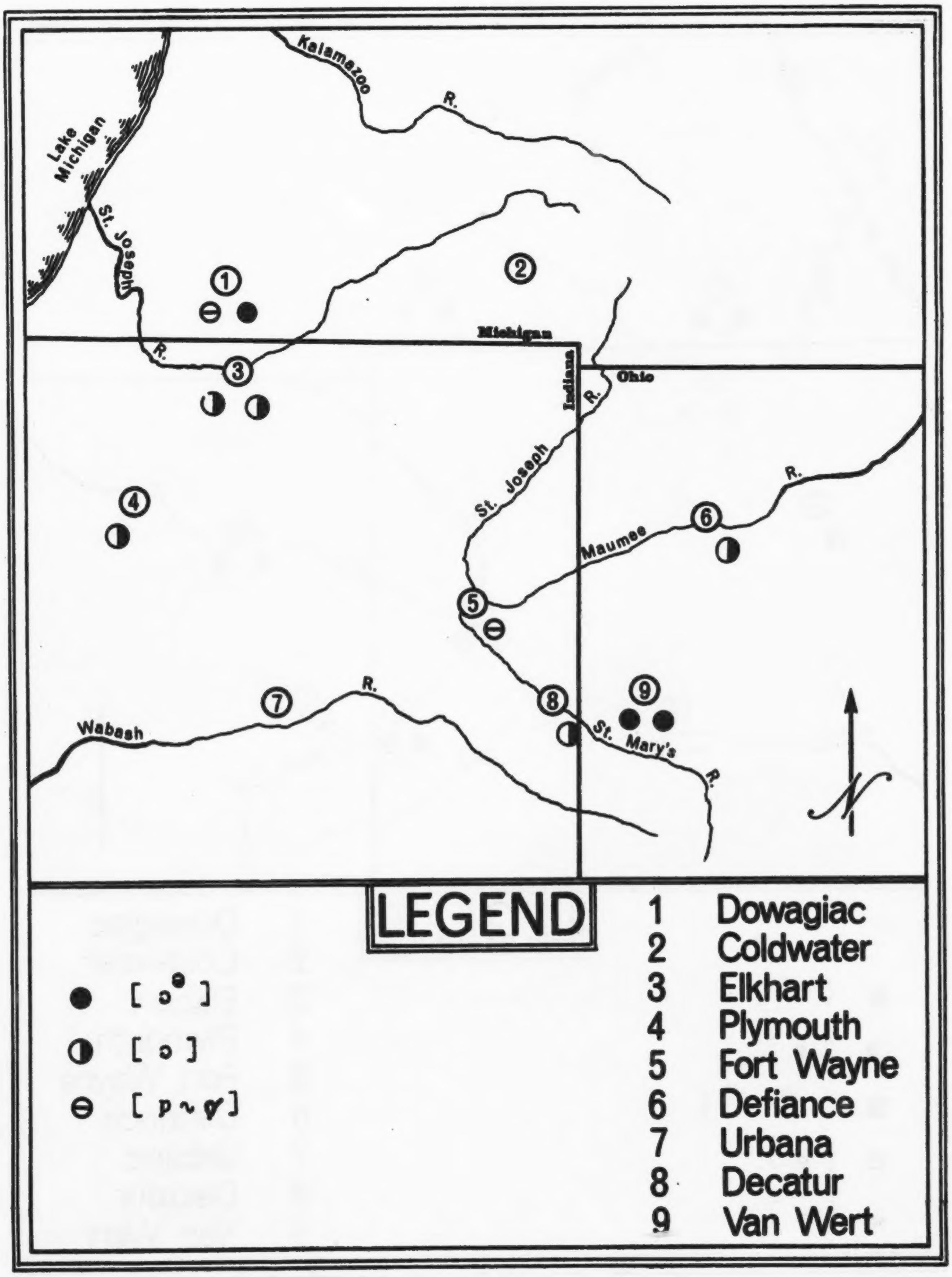
Lake Michigan
Kalamazoo R.
St. Joseph R.
Michigan
Indiana
Ohio
St. Joseph R.
Maumee R.
Wabash R.
St. Mary's R.
①
②
③
④
⑤
⑥
⑦
⑧
⑨
LEGEND
● [ɔᵊ]
◑ [ɔ]
⊖ [ɒ ~ ɒ̸]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B10. Variants of / ɔ / in Saw.

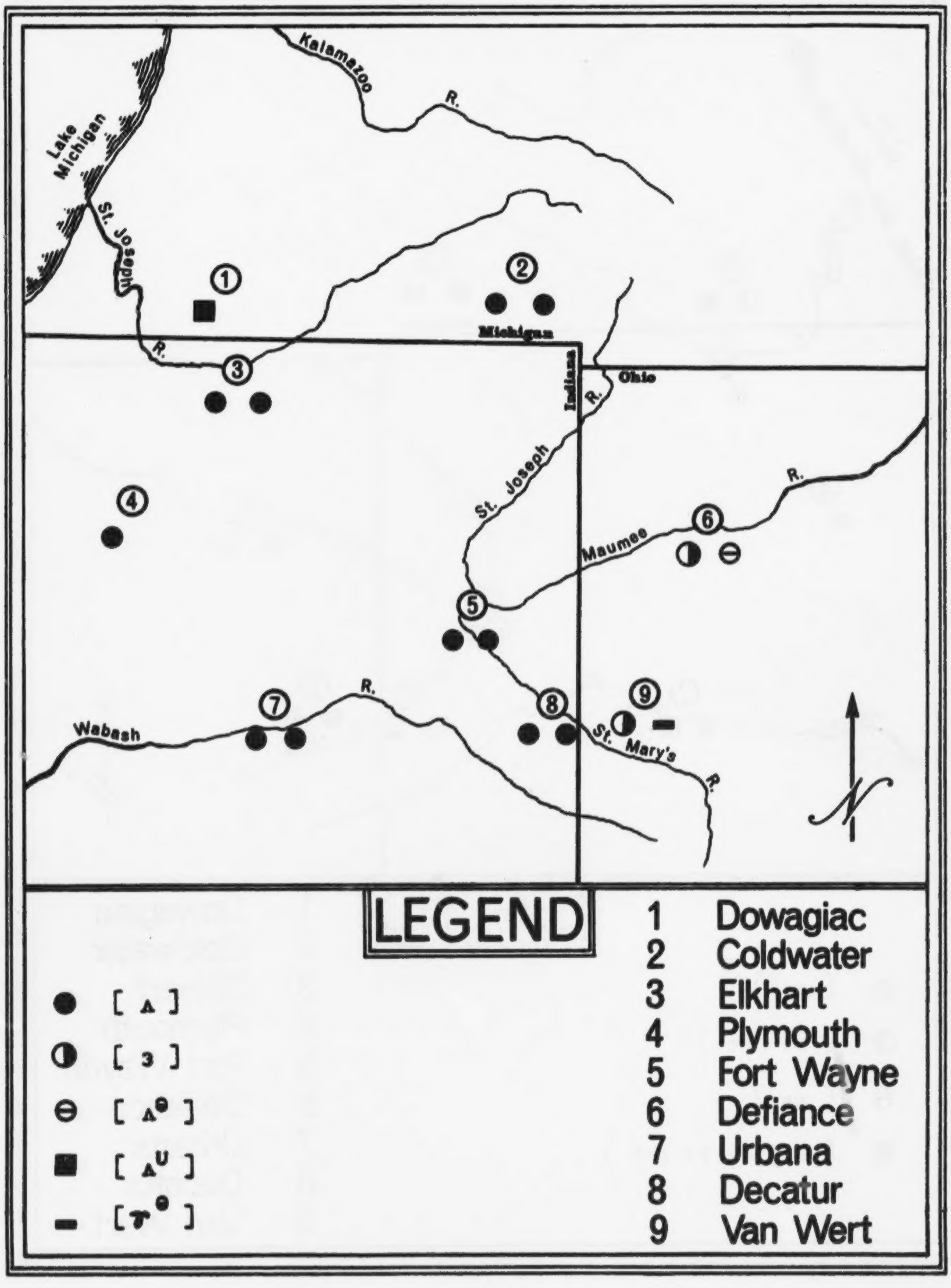
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
N
①
②
③
④
⑤
⑥
⑦
⑧
⑨
LEGEND
● [ʌ]
◑ [ɜ]
⊖ [$ʌ^{ə}$]
■ [$ʌ^{ʊ}$]
▬ [$ɤ^{ə}$]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B11. Variants of / ə / in _Judge_.

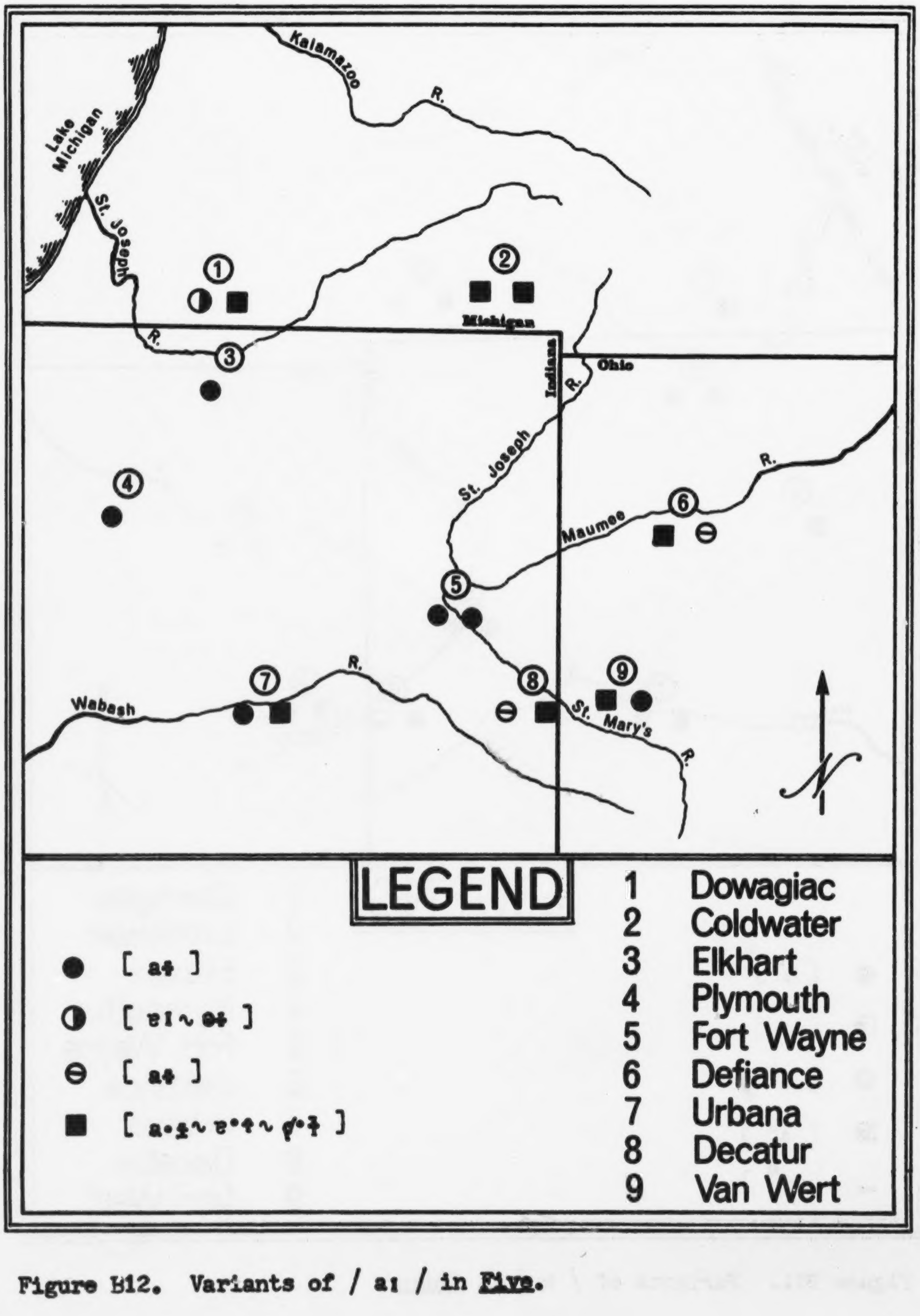
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
①
②
③
④
⑤
⑥
⑦
⑧
⑨
Michigan
Indiana
Ohio
R.
St. Joseph
Maumee
R.
Wabash
R.
St. Mary's
R.
N
LEGEND
● [aɨ]
◑ [ɐɪ ∼ əɨ]
⊖ [aɨ]
■ [a·ɨ̞ ∼ ɐ·ɨ ∼ ɑ̟·ɨ̞]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B12. Variants of / aɪ / in Five.

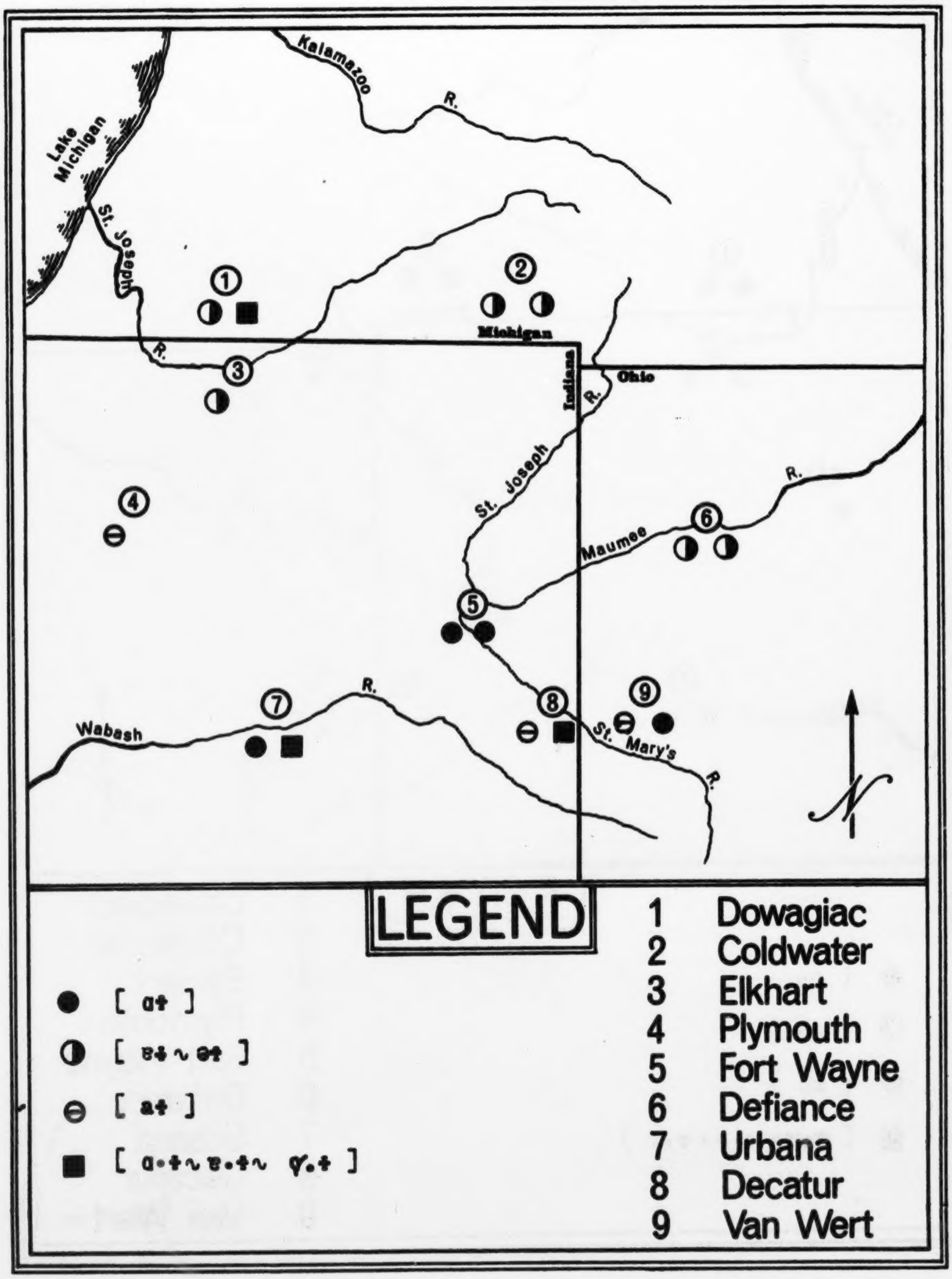
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
①
②
③
Michigan
Indiana
Ohio
R.
④
St. Joseph
R.
⑥
Maumee
⑤
⑦
R.
Wabash
⑧
⑨
St. Mary's
R.
N
LEGEND
● [ɑɨ]
◐ [ɐɨ ∼ əɨ]
⊖ [aɨ]
■ [ɑˑɨ ∼ ɐˑɨ ∼ ɣˑɨ]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B13. Variants of / aɪ / in *Twice.*

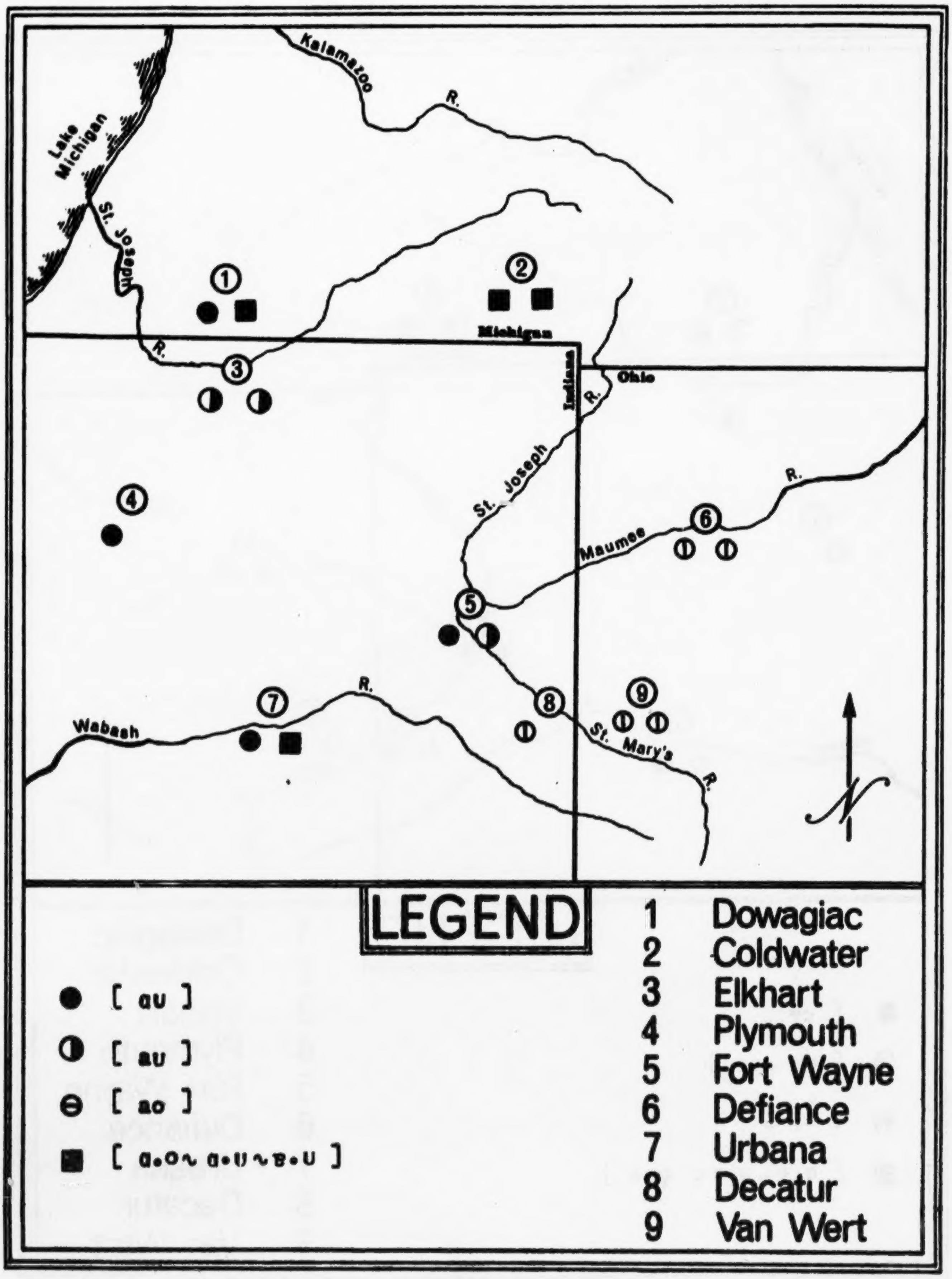
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
N
①
②
③
④
⑤
⑥
⑦
⑧
⑨
LEGEND
● [ɑʊ]
◐ [aʊ]
⊖ [ao]
■ [ɑ·o ~ ɑ·ʊ ~ ɐ·ʊ]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B14. Variants of / aʊ / in Drowned.

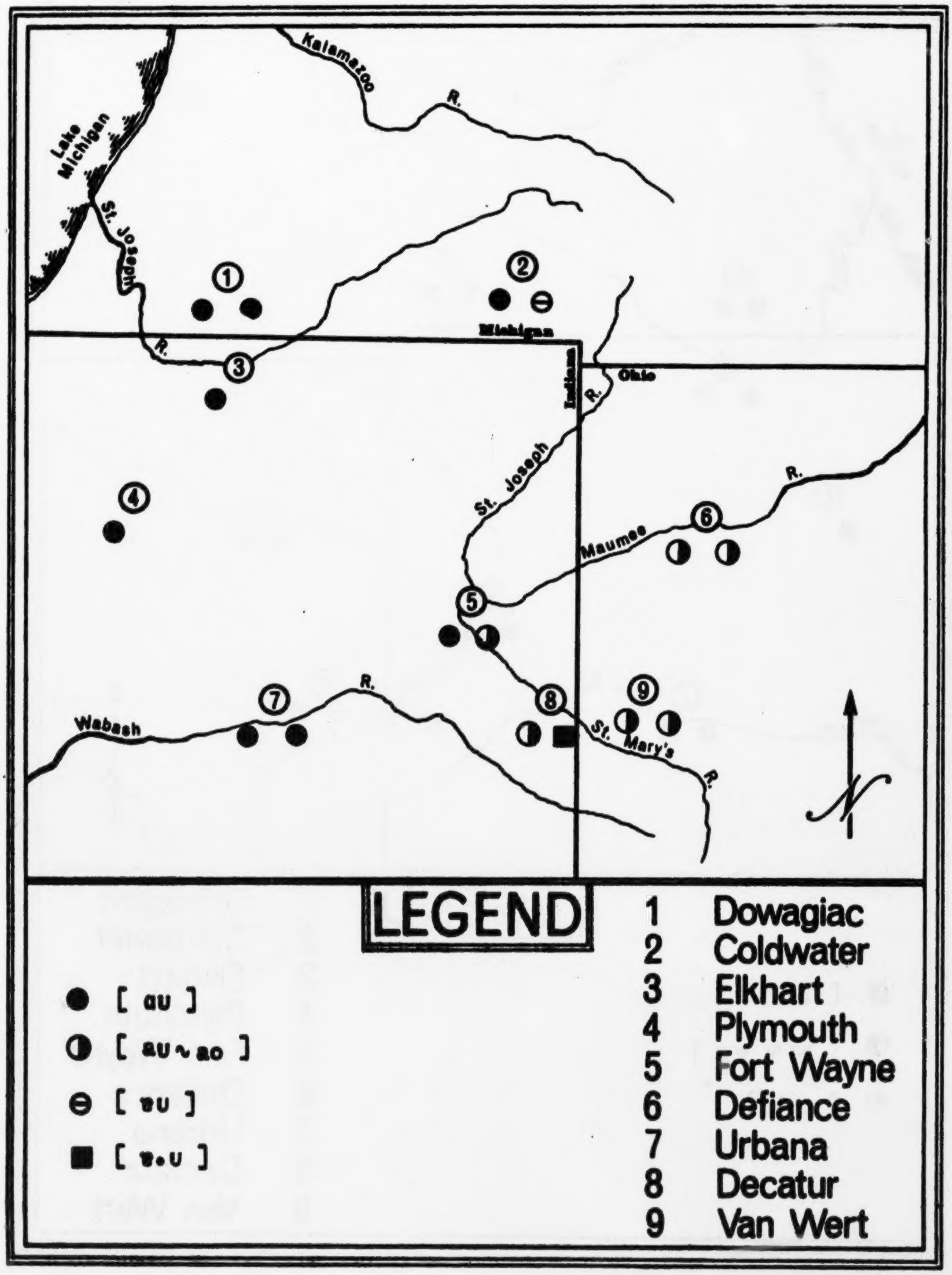
Lake Michigan
Kalamazoo R.
St. Joseph R.
Michigan
Indiana
Ohio
St. Joseph R.
Maumee R.
Wabash R.
St. Mary's R.
1
2
3
4
5
6
7
8
9
N
LEGEND
● [ɑʊ]
◐ [aʊ∼ao]
⊖ [ɐʊ]
■ [ɐ·ʊ]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B15. Variants of / aʊ / in Without.

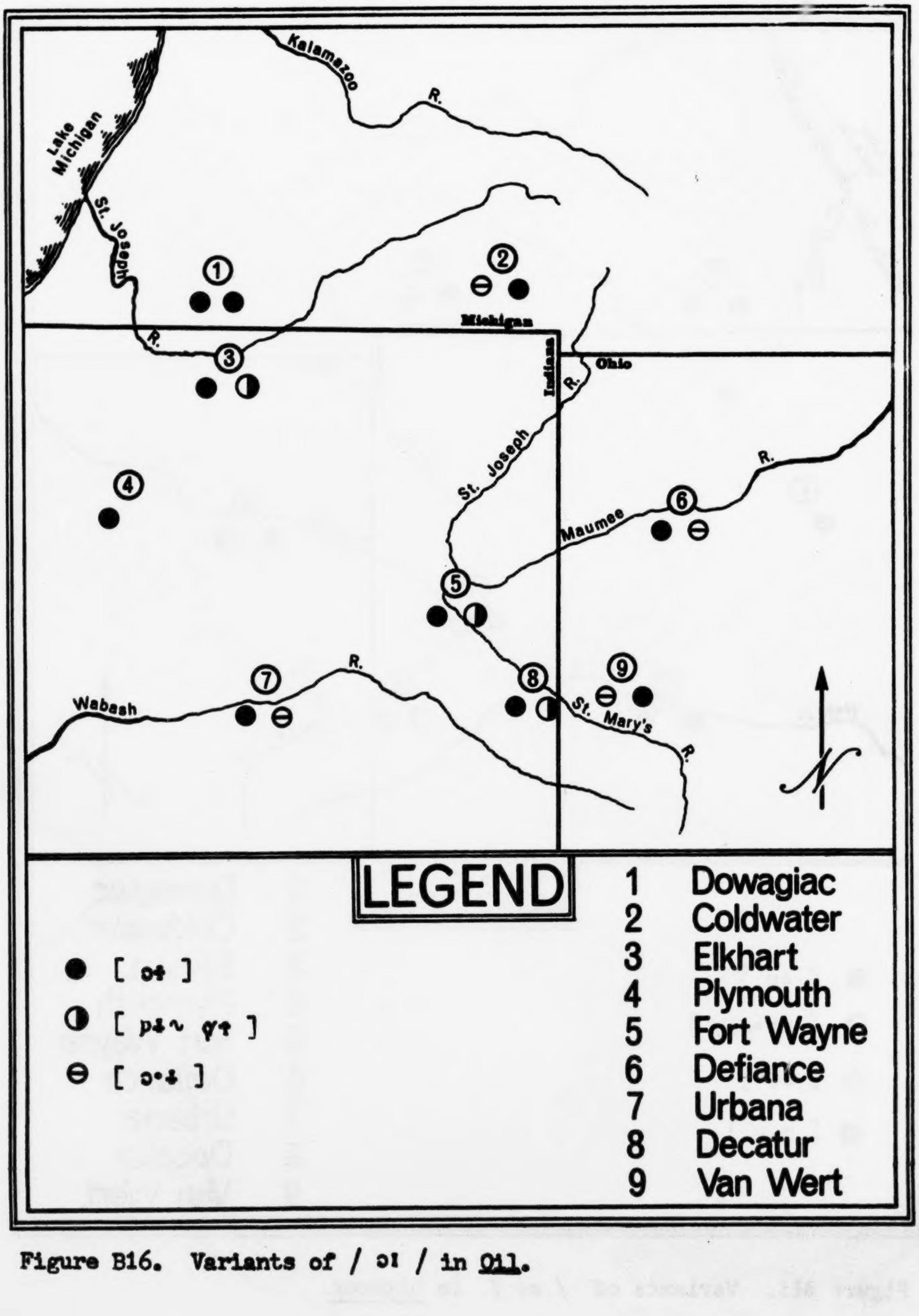
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
①
②
③
④
⑤
⑥
⑦
⑧
⑨
N
LEGEND
● [ɔɨ]
◑ [ɒɨ̞ ~ ɣɨ]
⊖ [ɔ·ɨ̞]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B16. Variants of / ɔɪ / in Oil.

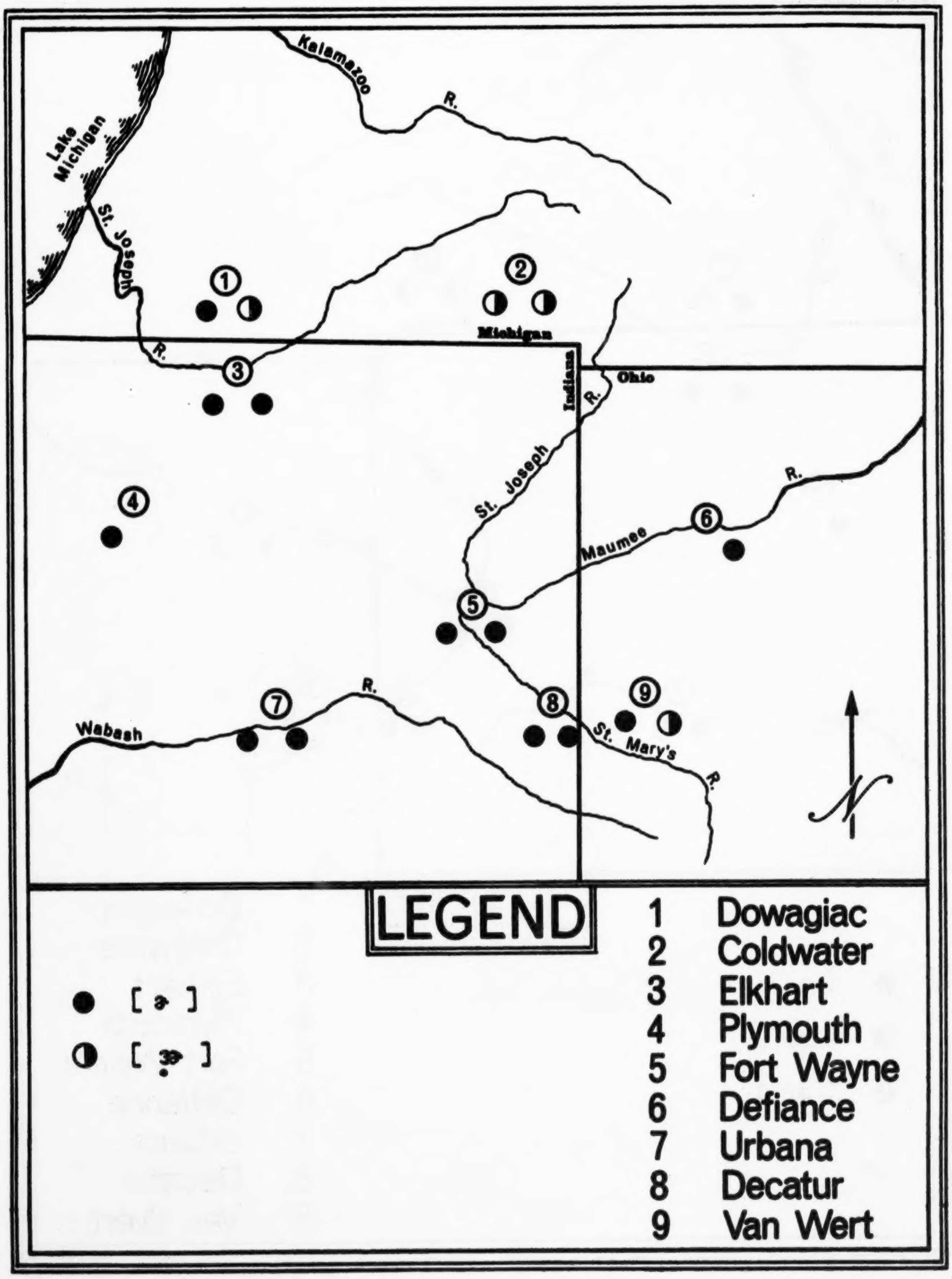
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
Maumee
R.
Wabash
R.
St. Mary's
R.
N
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
LEGEND
● [ɚ]
◑ [ɝ̣]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B17. Variants of / ɜ / in *Thirty*.

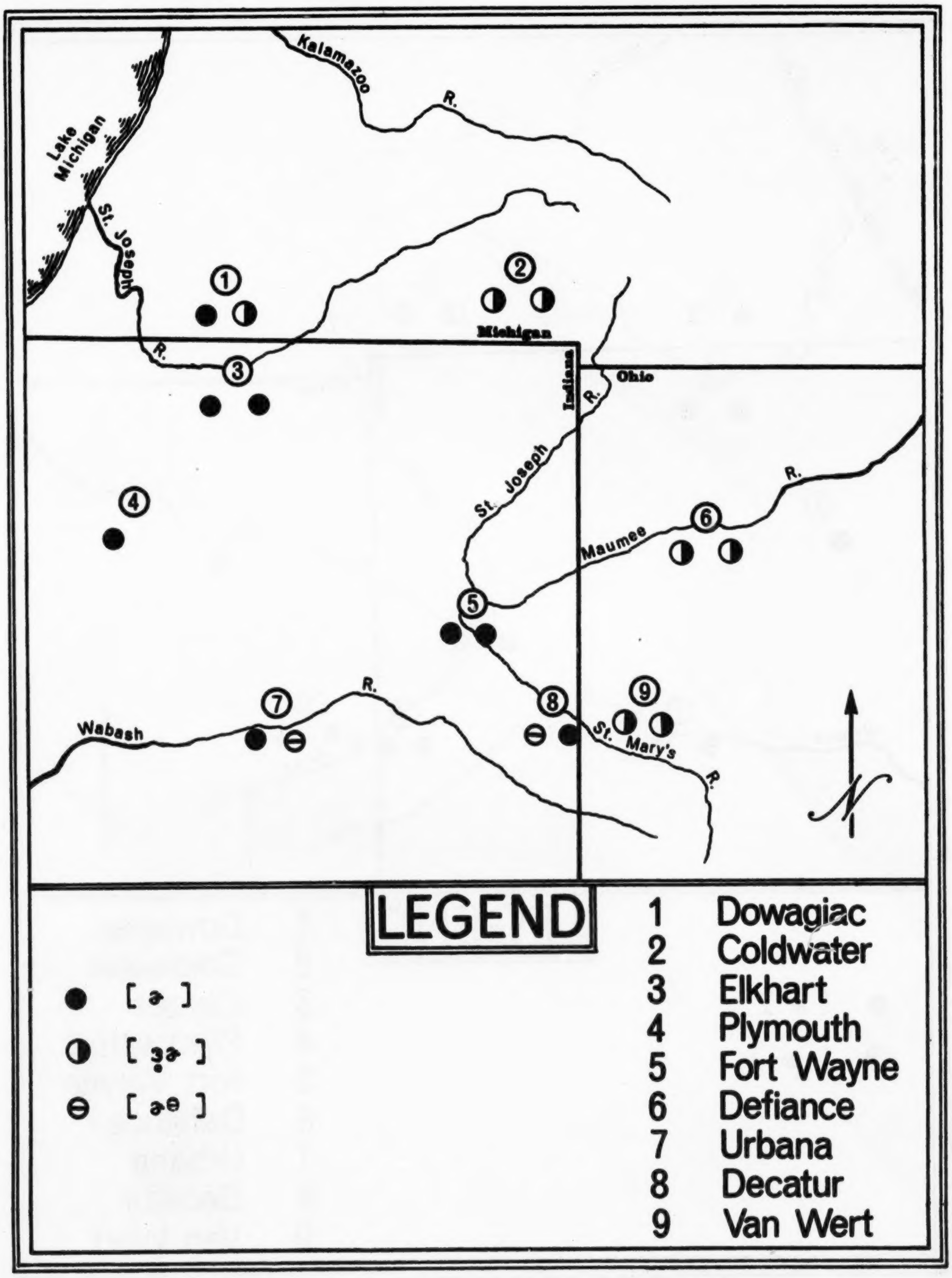
Kalamazoo
R.
Lake Michigan
St. Joseph
R.
Michigan
Indiana
Ohio
R.
St. Joseph
R.
Maumee
Wabash
R.
St. Mary's
R.
1
2
3
4
5
6
7
8
9
N
LEGEND
● [ɚ]
◑ [ɜ̣ɚ]
⊖ [ɚᵉ]
1 Dowagiac
2 Coldwater
3 Elkhart
4 Plymouth
5 Fort Wayne
6 Defiance
7 Urbana
8 Decatur
9 Van Wert

Figure B18. Variants of / ɜ / in Girl.

APPENDIX C

INSTRUMENT USED FOR TESTING SUBJECTIVE RESPONSES TO DIALECT FEATURES

Script for Dialect Test Tape

Pronunciation Items

AA$_1$ = upper middle-class Anglo-American

AA$_2$ = upper-middle-class Anglo-American who gives both standard and nonstandard pronunciations

BA$_1$ = upper middle-class Black-American

BA$_2$ = lower-class Black-American who is a recent arrival

BA$_3$ = lower-class Black-American who is a native

LA$_1$ = middle-class Latin-American who gives both standard and nonstandard pronunciations

INVESTIGATOR: Item #1. The wife of your uncle is your...

AA$_1$: aunt...aunt

INVESTIGATOR: Item #2. French-fried potatoes are often...

BA$_1$: greasy...greasy

INVESTIGATOR: Item #3. Black smoke poured from the factory...

LA$_1$: chimney...chimney

INVESTIGATOR: Item #4. From the corner of the ceiling hung a large...

AA$_1$: cobweb...cobweb

INVESTIGATOR: Item #5. After the accident, the driver called the...

BA$_2$: police...police

INVESTIGATOR: Item #6. Two plus two equals...

BA$_3$: four...four

INVESTIGATOR: Item #7. For a new mechanic, his work was...

LA$_1$: good...good

INVESTIGATOR: Item #8. On the corner stood a tall, thin...

BA$_1$: man...man

INVESTIGATOR: Item #9. Don't ask her to bake a cake; she...

LA$_1$: can't...can't

INVESTIGATOR: Item #10. When the sun came out, she hung out the...

AA$_1$: wash...wash

INVESTIGATOR: Item #11. What we need on a rainy day is an...

BA$_2$: umbrella...umbrella

INVESTIGATOR: Item #12. My car needs a change of...

LA$_1$: oil...oil

INVESTIGATOR: Item #13. Stray dogs often kill...

AA$_1$: sheep...sheep

INVESTIGATOR: Item #14. When the sun came out, she hung out the...

LA$_1$: wash...wash

INVESTIGATOR: Item #15. She took my book, not...

LA$_1$: hers...hers

INVESTIGATOR: Item #16. You prefer that house; I prefer...

BA$_3$: this...this

INVESTIGATOR: Item #17. I have two sons and one...

AA$_1$: daughter...daughter

INVESTIGATOR: Item #18. One-half of ten equals...

LA$_1$: five...five

INVESTIGATOR: Item #19. In the courtroom, silence was ordered by the...

BA$_1$: judge...judge

INVESTIGATOR: Item #20. After the fire destroyed their home, the family had...

BA_3: nothing...nothing

INVESTIGATOR: Item #21. Money you can't repay you shouldn't...

BA_2: borrow...borrow

INVESTIGATOR: Item #22. When dinner was ready, she invited us to sit...

AA_1: down...down

INVESTIGATOR: Item #23. When the sun came out, she hung up the...

AA_2: wash...wash

INVESTIGATOR: Item #24. The wife of your uncle is your...

BA_3: aunt...aunt

INVESTIGATOR: Item #25. French-fried potatoes are often...

AA_1: greasy...greasy

INVESTIGATOR: Item #26. Black smoke poured from the factory...

BA_2: chimney...chimney

INVESTIGATOR: Item #27. From the corner of the ceiling hung a large...

LA_1: cobweb...cobweb

INVESTIGATOR: Item #28. Two plus two equals...

BA_1: four...four

INVESTIGATOR: Item #29. For a new mechanic, his work was very...

LA_1: good...good

INVESTIGATOR: Item #30. What we need on a rainy day is an...

AA_1: umbrella...umbrella

INVESTIGATOR: Item #31. The dog was sleeping in my favorite...

LA_1: chair...chair

INVESTIGATOR: Item #32. On the corner stood a tall, thin...

LA_1: man...man

INVESTIGATOR: Item #33. My car needs a change of...

AA_1: oil...oil

INVESTIGATOR: Item #34. Money you can't repay you shouldn't...

BA_3: borrow...borrow

INVESTIGATOR: Item #35. Don't ask her to bake a cake; she...

LA_1: can't...can't

INVESTIGATOR: Item #36. In the courtroom, silence was ordered by the...

BA_2: judge...judge

INVESTIGATOR: Item #37. After the accident, the driver called the...

BA_1: police...police

INVESTIGATOR: Item #38. The dog was sleeping in my favorite...

LA_1: chair...chair

INVESTIGATOR: Item #39. One-half of ten is...

BA_2: five...five

INVESTIGATOR: Item #40. She took my book, not...

AA_1: hers...hers

INVESTIGATOR: Item #41. The wife of your uncle is your...

LA_1: aunt...aunt

INVESTIGATOR: Item #42. My car needs a change of...

BA_3: oil...oil

INVESTIGATOR: Item #43. Black smoke poured from the factory...

LA_1: chimney...chimney

INVESTIGATOR: Item #44. I have two sons and one...

BA_1: daughter...daughter

INVESTIGATOR: Item #45. Stray dogs often kill...

LA_1: sheep...sheep

INVESTIGATOR: Item #46. French-fried potatoes are often...

AA$_2$: greasy...greasy

INVESTIGATOR: Item #47. One-half of ten equals...

AA$_1$: five...five

INVESTIGATOR: Item #48. In the courtroom, silence was ordered by the...

LA$_1$: judge...judge

INVESTIGATOR: Item #49. I prefer that house; you prefer...

BA$_1$: this...this

INVESTIGATOR: Item #50. Money you can't repay you shouldn't...

BA$_2$: borrow...borrow

INVESTIGATOR: Item #51. After the fire destroyed their home, the family had...

BA$_1$: nothing...nothing

INVESTIGATOR: Item #52. When dinner was ready, she asked us to sit...

BA$_2$: down...down

Grammatical Items

INVESTIGATOR: Item #1. He gave five _______.

AA$_2$: dollars

INVESTIGATOR: Item #2. He opened the door _______.

AA$_2$: hisself

INVESTIGATOR: Item #3. In my language I can speak ____ ______.

AA$_2$: more better

INVESTIGATOR: Item #4. The swimmer ________ in the river.

AA$_2$: drownded

INVESTIGATOR: Item #5. He _______ give all the facts.

AA$_2$: doesn't

INVESTIGATOR: Item #6. I don't ask ________ for myself.

AA$_2$: anything

INVESTIGATOR: Item #7. ___ did you invite to go fishing with you?

AA$_2$: Who

INVESTIGATOR: Item #8. When she asked who was there, he replied, "It __ _".

AA$_2$: is I

INVESTIGATOR: Item #9. This is Mr. _______ ___.

AA$_2$: Smith's car

INVESTIGATOR: Item #10. Please give me ____ ______.

AA$_2$: them papers

INVESTIGATOR: Item #11. He gave me five ______.

AA$_2$: dollar

INVESTIGATOR: Item #12. He opened the door _______.

AA$_2$: himself

INVESTIGATOR: Item #13. Yesterday, he ____ into the pool.

AA$_2$: dove

INVESTIGATOR: Item #14. The boy _______ in the river.

AA$_2$: drowned

INVESTIGATOR: Item #15. In my language I can talk ______.

AA$_2$: better

INVESTIGATOR: Item #16. By noon I ___ _____ three cokes.

AA$_2$: had drunk

INVESTIGATOR: Item #17. He _____ give all the facts.

AA$_2$: don't

INVESTIGATOR: Item #18. We __ ______ here a long time.

AA$_2$: be living

INVESTIGATOR: Item #19. I _____ ask _______ for myself.

AA_2: don't nothing

INVESTIGATOR: Item #20. By noon I ___ _____ three cokes.

AA_2: had drank

INVESTIGATOR: Item #21. ____ did you invite to go fishing with you?

AA_2: Whom

INVESTIGATOR: Item #22. When she asked who was there, he replied, "It __ __".

AA_2: is me

INVESTIGATOR: Item #23. Yesterday he _____ into the pool.

AA_2: dived

INVESTIGATOR: Item #24. Please give me _____ papers.

AA_2: those

INVESTIGATOR: Item #25. This is Mr. _____ ___.

AA_2: Smith car

INVESTIGATOR: Item #26. By noon I ___ _______ three cokes.

AA_2: had drinked

INVESTIGATOR: Item #27. We ____ ____ ______ here a long time.

AA_2: have been living

Instructions for Marking the Attitude Scales

We would like to know what you think about the way different people pronounce certain words.

Please listen carefully to the tape recording. One voice will read the item number and all of a sentence except one word. Another voice will pronounce a word completing the sentence. This word will be repeated. You should judge only the pronunciation of the word completing the sentence.

Here is an example:

"Item Number 1. This purse is not imitation leather; it is:"

(Answer) "GENUINE...GENUINE."

Below each item number you will find some pairs of words arranged in a manner similar to the following:

ITEM NO. 1A

EDUCATED____:____:____:____:____:____UNEDUCATED
FRIENDLY____:____:____:____:____:____FRIENDLY
MEXICAN-AMERICAN____:____:____:____:____:____WHITE
WHITE____:____:____:____:____:____NEGRO
UNSKILLED WORKER____:____:____:____:____:____PROFESSIONAL

As you listen to the repeated pronunciation, decide which word of each pair describes the pronunciation best and mark an "X" in the space which most accurately shows your opinion.

If your feeling about the pronunciation is extremely one way or extremely the other way, mark in the following manner:

EDUCATED_X__:____:____:____:____:____UNEDUCATED
EDUCATED____:____:____:____:____:_X__UNEDUCATED

If your feeling about the pronunciation is quite one way or quite the other way, mark in the following manner:

EDUCATED____:_X__:____:____:____:____UNEDUCATED
EDUCATED____:____:____:____:_X__:____UNEDUCATED

If your feeling about the pronunciation is slightly one way or slightly the other way, mark in the following manner:

EDUCATED____:____:_X__:____:____:____UNEDUCATED
EDUCATED____:____:____:_X__:____:____UNEDUCATED

Remember; MARK ONLY ONE CHOICE FOR EACH PAIR OF WORDS.

Don't worry if some of the word pairs are not precise opposites or don't seem to fit the pronunciation. Just decide which space for each pair best describes your feeling about the pronunciation. There are NO right or wrong answers. Your opinion is what counts. Please make a choice for each pair of words.

Sample of Attitude Scales

ITEM NO. 1

UNFRIENDLY ____:____:____:____:____:____ FRIENDLY
EDUCATED ____:____:____:____:____:____ UNEDUCATED
MEXICAN-AMERICAN ____:____:____:____:____:____ WHITE
WHITE ____:____:____:____:____:____ NEGRO
UNSKILLED WORKER ____:____:____:____:____:____ PROFESSIONAL

ITEM NO. 2

MEXICAN-AMERICAN ____:____:____:____:____:____ WHITE
UNSKILLED WORKER ____:____:____:____:____:____ PROFESSIONAL
UNFRIENDLY ____:____:____:____:____:____ FRIENDLY
EDUCATED ____:____:____:____:____:____ UNEDUCATED
WHITE ____:____:____:____:____:____ NEGRO

ITEM NO. 3

WHITE ____:____:____:____:____:____ NEGRO
UNFRIENDLY ____:____:____:____:____:____ FRIENDLY
MEXICAN-AMERICAN ____:____:____:____:____:____ WHITE
UNSKILLED WORKER ____:____:____:____:____:____ PROFESSIONAL
EDUCATED ____:____:____:____:____:____ UNEDUCATED

ITEM NO. 4

EDUCATED ____:____:____:____:____:____ UNEDUCATED
MEXICAN-AMERICAN ____:____:____:____:____:____ WHITE
UNFRIENDLY ____:____:____:____:____:____ FRIENDLY
UNSKILLED WORKER ____:____:____:____:____:____ PROFESSIONAL
WHITE ____:____:____:____:____:____ NEGRO

ITEM NO. 5

UNFRIENDLY ____:____:____:____:____:____ FRIENDLY
UNSKILLED WORKER ____:____:____:____:____:____ PROFESSIONAL
EDUCATED ____:____:____:____:____:____ UNEDUCATED
MEXICAN-AMERICAN ____:____:____:____:____:____ WHITE
WHITE ____:____:____:____:____:____ NEGRO

VITA

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EDUCATION:

Elmhurst High School, Fort Wayne, Indiana: Diploma, 1935

Ball State University, Muncie, Indiana: B.S., 1939

Ball State University, Muncie, Indiana: M.A., 1946

Purdue University, Lafayette, Indiana: Ph.D., 1969

EXPERIENCE:

Teacher: Petroleum High School, Wells County, Indiana 1939-41

Teacher: Hartford City High School, Blackford County, Indiana, 1941-43

Military Service: United States Air Force, 1943-46

Instructor in English: Indiana University Center, Fort Wayne, Indiana, 1946-47

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Military Service: United States Air Force, 1950-52

Teacher and English Department Head: South Side High School, Fort Wayne, Indiana, 1952-61

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